

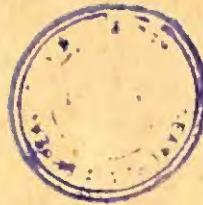
Review of Educational Research

VOL. XVI, No. 2

APRIL 1946

LANGUAGE AND THE FINE ARTS

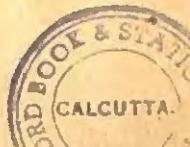
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April 1946

Language and the Fine Arts

Reviews the literature for the three-year period since the issuance of Volume XIII, No. 2, April 1943.

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Reviews the literature for the three-year period since the issuance of Volume XIII, No. 5, December 1943.

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INTRODUCTION

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THIS ISSUE reviews the research in the areas of language, art, and music published during the past three years. In addition to studies directly related to instructional practices, effort has been made to include pertinent research from the fields of psychology and esthetics because such work not only offers leads of immediate value to teachers and administrators but suggests worthwhile problems for further investigation.

It is encouraging to find that, in spite of the concentration on the war effort, a goodly number of studies have appeared. More than 400 articles in one field were winnowed in order to determine the most significant contributions that could be reported in the allotted space. Altho each study reviewed adds to our growing knowledge of teaching in these areas, there are few comprehensive attacks on the most critical instructional problems. The six final volumes on the *Owatonna Art Education Project* mark a notable exception in that they report an inclusive analysis of the factors which should condition art instruction together with accounts of realistic procedures for reaching the desired goals.

On the basis of research to date, on instruction in art and music especially, and in languages to a lesser degree, the following generalizations are warranted. First, relatively little attention has been given to the final criterion on which instruction should be judged; namely, the changes in behavioral patterns resulting from educational programs. Only scattered indexes, such as an increased attendance at art museums, widespread popularity of daytime serials on the radio, box-office receipts from motion pictures and the legitimate theater, and best-seller lists of literature are available. The degree and direction of educational influence on such patterns is, of course, extremely difficult to ascertain. But until there is evidence on the relation of instructional programs to public taste and participation in the arts, educators will have little knowledge of the effectiveness of their efforts.

Second, the widely held, but narrowly conceived, academic concept of research has hindered progress. Greater effort is often put on achieving scientific respectability than on tackling real problems. Research in the arts is more frequently evaluated in terms of conformity to accepted methodology than in terms of the importance of the problem. When methodology is elevated above usefulness of results, one gets further and further from central problems, nearer and nearer to "research for research's sake." It is not intended to belittle the use of every scientific control and of every advance in quantitative methodology, but it should be pointed out that research is not by definition quantitative. It is believed that when research workers use every known tool of their trade, but do not force their problems into statistical strait jackets, greater contributions will result.

Third, research in the arts is further hampered by the complexity, real or apparent, of the subjectmatter; the lack of research methodology suited

to the field; and the scarcity of personnel trained in research and also versed in the arts. Thus, there is a conspicuous gap between publications which report opinions and assumptions and those which in an effort to be academically respectable have scientifically avoided central and significant problems. These are problems of primary concern to graduate schools and to educational research activities.

Fourth, there is need for coordinated attack on the basic problems of instructional efficiency in the arts. Such matters as the development of a deep, lasting appreciation or the discovery and nurture of creative talent are the subject of countless essays and minor studies but, with a few exceptions, not the subject of comprehensively conceived research. Nor has the attainment of the complex of desirable outcomes of arts instruction—the arousal of interest, the refinement of discrimination, the discernment of values, the enrichment of the emotional aspects of appreciation, the learning of facts, and the development of technical skills—been studied with careful attention to their interrelationships and to their significance at different levels of artistic maturation. Only thru carefully planned, long term research directed toward central issues can instruction in the arts make significant progress. The major question is: Under what conditions do students most effectively attain the goals desired from instruction in the arts? This question should be repeatedly asked until answers are found.

RAY FAULKNER, *Chairman*
Committee on Language and the Fine Arts

The Language Arts: General Comment

GRACE COCHRAN

It is to be expected that a survey of the reports dealing with the language arts during the years 1943-45 would delineate trends resulting from pressure due to war conditions; rapid acquisition of foreign languages among the armed services, increased literacy in the fighting forces, more effective speech and other means of communication under crucial conditions, accelerated learning programs of a preparatory nature—all challenged education to produce the most in the least possible time. Altho experimental studies and some long-time investigations have been completed, major emphasis has been directed toward intensive teaching programs.

Such educational adaptation is reflected in various ways in the literature summarized. In some cases there has been a reworking of objectives and publication of restated aims. In others, newly devised methods have been described in detail, accompanied by more or less subjective evaluations of the resultant learning. Typical examples of such publications are the large number dealing with the ASTP programs in foreign-language training. Redefining of objectives was coincident with a stress upon the development of the ability to handle the language in a practical situation and subsequently led to the conception of the linguist-informant method of teaching. Used in its most intensive form in many army classes, modified and adapted to meet demands in both army and civilian situations, this method is being subjected to the most critical scrutiny and the data obtainable only from experimentation are indispensable for objective evaluation. This last fact demonstrates circumstances in several aspects of the language arts. Altho the literature contains many references to experimental method, there are frequent instances in which writers express a desire for the objectivity precluded by the situational conditions. The relative lack of objective evaluation at this stage does not in itself detract from the value of this material which was stimulated by the national emergency.

Altho it is difficult to determine with certainty the time at which new developments take place, at least two new approaches which seem relatively recent and promising are indicated. That area to which listening and the listener are central is apparently emerging as a new aspect of communication skills, with the promise of much needed research upon which educational programs may be based. Altho the facilitation of learning thru audio-visual integration is in no sense new to the educational psychologist, the really extensive output in the area of newer and more effective technics in this field makes special mention justifiable.

Possibly one of the most burning issues, to which most of the different aspects of research represented by the divisions of this REVIEW are related, is that of a redirection of education on a very broad base. Can there evolve a general education and if so in what ways are the language arts involved? Traces of such thinking appear especially in the section on communication skills and reading.

CHAPTER I

Research in Reading During the War Years

RUTHERFORD B. PORTER, HUGH SHAFER, AND EASON MONROE

IN WAR as in peace the interests of American educators continue to focus upon problems of reading development. Thruout the three-year period covered by this review, the writers found more than four hundred pertinent titles in the field, approximately half of which reported data resulting from some type of original research. A lower incidence of outstanding investigations and a marked decline in reports during 1945 are the only characteristics noted to distinguish this period of research in reading from that of any comparable span thruout the past twenty years. These concomitants of war do not seriously diminish the over-all contribution which has thus currently been made to the total effort to understand and to promote the reading growth of both children and adults.

In light of publication economies, editorial policies have limited this review in both the number of reports cited and the extent of discussion relative to each contribution. Pressing within the scope of less than five thousand words the treatment which has previously required approximately twenty thousand has been an undertaking of exacting disciplines and difficult choices. In the process of choosing the ninety titles which appear in the bibliography, the reviewers have been forced to omit reference to many important and useful reports.

The selection of the significant research reviewed was made on the basis of two criteria: (a) precise definition of the term "research" and (b) high standard of "significance." Studies which made use of casual, uncontrolled procedures were usually not included unless they presented data or authoritative judgment relating to the more critical problems of reading development. Conversely, many well-conducted investigations were omitted when they dealt with problems which are no longer central.

Readers who wish to consult additional sources of critical evaluation of opinion and research in reading will find helpful Gray's regular summaries (27, 28) and the reports of the 1943 and 1944 Conferences on Reading (29, 30). For those interested in comparing current trends in reading research with the findings of previous years, Bett's new bibliographic index (6) is an important aid.

Literacy

New data have reemphasized the extent and seriousness of adult illiteracy. The pressures of war forced recognition of the fact that millions of American adults cannot read well enough to fight a highly technical war, let alone carry on intelligent, informed activities as citizens in a democracy. Brunner (9), assessing cursorily the data which are available from the 1940 census, pointed out that, altho amount of schooling is gradually in-

creasing, at least 13 percent of the adult population are functionally illiterate.

In the military services, the literacy problem was especially acute. It is a modern phenomenon that men who cannot read cannot fight. The efforts of the Army to meet the problem of preparing illiterate men for effective military service were described by Witty and Goldberg (89) and enthusiastically assessed by Witty (90). Thru such programs, thousands of young men, who had previously been denied what most of us consider a democratic birthright, were taught at least the rudiments of reading. Altho they are not yet in the literature, it is likely that reports will soon make available to teachers generally and to adult education specialists particularly the literacy training experiences of the other armed services.

Reassuring data were reported concerning the possibility of developing adult reading. Buswell (29) cited new evidence on the improvement of adult reading. Similarly, Broxson (8) reported significant gains made by 175 adults as the result of a twelve-week program of reading development. In the surveys of adult reading, teachers and school administrators did not escape scrutiny. Simpson (71) found that 50 percent of the twelfth-graders he tested by means of the Iowa Silent Reading Test made better scores than 45 percent of the teachers and administrators similarly tested. In addition, the teachers and administrators reported strikingly irregular reading habits, approximately 40 percent not even having "looked at" a professional book during the month of the study. This is not, of course, the first time that the relatively low reading abilities and immature reading habits of teachers and other school leaders have been exposed.

The over-all significance of these and previously reported data concerning adult reading cannot be too heavily emphasized. It is too much to hope that the many critical social and economic problems which face Americans individually and collectively will find intelligent solution at the hands of a people who have not yet learned to use reading as a way of democratic social action.

The Nature of Reading and Its Relationships

Important research was reported on the nature of the reading process and the relationships among reading and other aspects of human development. Hall and Robinson (33), thru analysis of scores on twenty-five different measures of reading administered to one hundred college freshmen, isolated five discrete factors which they designated as: (a) a study attitude, (b) an inductive factor, (c) a verbal factor, (d) a rate factor, and (e) a chart-reading skill. A sixth factor isolated in this study was not clearly defined. Using the judgment of authorities and specially constructed measures, Davis (14) reported data relative to what he considered nine basic reading comprehension skills. Artley (4) surveyed the evidence from several studies, principally his own doctorate thesis published in 1942, to support the interpretation that reading comprehension is a highly dif-

ferentiated ability. He summarized ". . . the factors inherent in general and specific reading comprehension, tho for the most part related, are not correlated to a sufficient degree to be able to say that the ability to engage successfully in one type of reading is by the same token related to the ability to engage successfully in another type, or that the command of one particular reading skill is by virtue of that fact related to another. . . ." In a later study (5), Artley found varying correlations above .70 between abilities in reading general informational material and those in reading material more specifically related to the social studies field. Whereas he agreed that these fairly high relationships probably mean that, for ordinary instructional purposes, a general comprehension test measures social studies reading abilities adequately, he concluded that there is a high degree of specificity in factors relating to reading comprehension in the social studies.

Four additional studies offered pertinent data on the relationships of the general and specific reading abilities. Analyzing scores of 867 fifth-grade pupils on a specially constructed test battery of mathematical, literary, sociological, and scientific materials, McMahon (54) concluded that, altho the group as a whole showed little variation in ability among the different types of material, the specific reading abilities of individual pupils varied considerably, with greatest variation occurring among pupils whose total test scores were in the lowest quartile. Shores (69) presented evidence that the abilities of ninth-grade pupils are significantly differentiated in the reading of historical, scientific, and literary materials. Treacy (83), in a study of 244 seventh-graders, found differentiation of reading abilities as related to the ability to solve arithmetic problems. Studying the eye-movements of sixty eighth-grade pupils, Seibert (67) found individual and group differences in the reading of various types of material. These findings strengthen considerably the contention that every teacher must be a teacher of reading. The assumption can no longer be held that the improvement of general reading ability will automatically result in the development of the many specialized reading skills which young people need in both school and life.

Two reports concerned the relationship between reading rate and reading comprehension. Blommers and Lindquist (7) found correlations of .30 between rate of comprehension and power of comprehension. Stroud and Henderson (76) reported correlations from .02 to .16 between "speed and learning scores." These new data contrast sharply with the rather commonly held belief that the fast reader is the more comprehending reader. The inconsistency of the findings in this area are perhaps attributable to the varying technics and controls used in measuring reading rate and comprehension. Sweeping generalizations concerning the relationship of rate and power in reading comprehension, especially in individual diagnosis and instruction, seem unwarranted by the evidence thus far developed.

The fallacy of estimating both mental ability, or mental age, and reading competence by means of any single measure was further exposed by reports of Strang (75) and Abbott (1). Strang found that reading scores for a given chronological or mental age often extend thruout the entire range of a test. Abbott found that a reading development program effected change in individual performance on one widely used measure of intelligence, but no change on another. He concluded that there may be wide individual variations in the constancy of IQ.

The Gilberts (24), continuing a long-term project of carefully controlled research, found that college students made significant gains in ability to spell selected words thru the reading of passages which contained these words.

Growing interest in the relationship between reading ability and academic success at the college level was reflected in reports by Humber (36) and Mathews, Larsen, and Butler (55). Both studies reported positive correlations between scholarship and reading ability. Attention in the future may profitably be turned to long-term investigations of scholastic improvement resulting from gains in reading ability.

Reading Adjustment: Causal Relationships

New data concerning causal factors strengthen the already well-established concept of the complexity of reading growth and its multiple interrelationships with all other aspects of human growth. Jackson (39), surveying psychological, social, and environmental differences between advanced and retarded readers, found positive degrees of relationship among twenty different variables and reading retardation. These variables included such factors as sex, IQ, occupation of father, personal illness, school grades, fears, and speech defects. Personality factors, he concluded, are definitely related to reading achievement.

A well-controlled study of pupils in grades III-VIII in a wartime industrial community led Huus (37) to conclude that changing schools does not affect scholastic (or reading) achievement. Samuels (64) concluded that girls have a significant advantage in both reading readiness and reading achievement when boys and girls are paired on the basis of mental age. Summarizing a study of the personnel opportunities of one hundred students at the University of Chicago, McCaul (52) wrote, ". . . the data seem to warrant the generalization that poor reading is merely one of a number of factors—educational, physical, environmental, emotional, social, financial, or vocational—which may be adversely affecting a college student's adjustment at a given time."

The relationship between reading disability and emotional disturbance has been observed repeatedly, and the assumption is common that reading disabilities give rise to personality problems. That the reverse may also be true is not so generally conceded. Hence, it is highly significant that three clear-cut studies appeared which emphasize the *reciprocal* re-

lationship between emotional adjustment and reading achievement and which make more plausible the contention that in many instances reading handicaps result from or are attendant upon basic personality disturbances.

Sylvester and Kunst (77), on the basis of case study analysis, concluded that a reading defect is a single aspect of more comprehensive disturbance in the evolution of psychobiological functions. They held that whenever tutoring succeeds, it does so because the tutor has fulfilled some of the fundamental emotional needs presented by the individual child. Lantz and Liebes (46) found emotional maladjustment present in twenty-eight of thirty-three retarded readers they studied. The data they presented support the hypothesis that in the majority of cases, nonreading may be merely the original expression of a child's inability to respond adequately to average classroom instruction.

Comparing thirty-four retarded readers, thirty-four average readers, and thirty-four good readers, equated in terms of age, IQ, mental age, school experience, and sex, Gann (22) found that the retarded readers show more markedly evidences of emotional disturbance. Retarded readers, she implied, should be considered personality problems as well as learning problems, and reading-development work should involve emotional therapeutics as well as direct-reading instruction.

Future research may establish more positively the "total personality" approach as a regular procedure in reading guidance. That reading clinics do not now give sufficient emphasis to the emotional concomitants of poor reading was observed by Kopel and Geerdes (42), who pointed out that 30 percent of the 41 clinics they studied made no attempt to analyze personality attributes. Those clinics which recognized to some degree the significance of emotional factors in reading disability used neither satisfactory techniques for personality diagnosis nor thorough-going procedures for emotional adjustment.

The usual volume of reports on the relationship among visual, dominance, and reading factors was present in the reviewed literature. Conflicting contentions and interpretations were characteristically current in these reports.

Park and Burri (57) presented evidence in support of their conclusion that efficient vision and reading growth are related and that visual immaturity may be responsible for initial reading difficulties. Eames (17, 18) likewise submitted new evidence on the importance of normal vision in good reading and general scholastic adjustment. Dalton (11), on the other hand, as a result of testing by means of the Keystone telebinocular the vision of 5000 school children, concluded that there is no significant general relationship between normal or defective vision and scholastic achievement.

Weber (84), Leavell and Fults (47), and LaGrone and Holland (45) submitted new evidence relative to the dominance controversy. Each of these reports cautiously suggested that there "seems" to be some degree of relationship among the phenomena of reversals, left or mixed dominance,

and reading disabilities. Hildreth (34), conversely, concluded that mixed dominance is not a prevailing factor in reading difficulties. Clearer light than usual was thrown upon this issue by the research and interpretations of Gilley and Parr (25), whose most significant conclusions were that (a) the reversal tendency decreases with maturation; and, (b) emotional imbalance seems to be one of the principal causes of the reversal tendency.

Of special interest among the reports on the visual factor in reading were those of Spache (73, 74), who found interesting individual variations in monocular and binocular reading. Some of the children he studied read best with their "preferred" eye, the next best with their "other" eye, and poorest with both eyes. He made the observation that ordinary reading tests are likely to underestimate the potential reading ability of some pupils.

Thru an investigation of visual and auditory associations, Schmidt (65) discovered that a third of the 308 retarded readers she studied showed decided preference for auditory presentation of material to be learned.

Reading Interests and Attitudes

The effect of the war upon the reading activities of the American people was described in the American Library Association reports for the years of 1943 and 1944 (2, 3). Investing their chief energies directly in the war effort, Americans found less time for reading. The reading done, however, was of better quality, emphasizing interests in world affairs. Despite the highly technological character of the war, technical reading fell off markedly in both 1943 and 1944. A trend toward more normal volume of reading, however, was already in evidence in 1944. Synnberg (78) surveyed the reading activities of 2500 Chicago high-school pupils from average low income homes and found that pulp magazines constituted the overwhelmingly predominant portion of the out-of-school reading of these young people. She concluded that it is fundamentally the home, not the school, that sets the standards for pupils' reading habits. The fact that comic books are somewhat more widely read by Negro children than by white children was reported by Witty and Moore (87). Here the factor of availability appears to be primary, Negro children having limited access to books of better quality than the comics and the other pulp types.

Children's interests in library books of fiction were studied by Rankin (61). Feingold (19) found that newspaper reading is a highly characteristic activity of urban secondary-school pupils. Daniel (12), in a study of the reading interests and needs of Negro college freshmen regarding social science materials, reported preferences among this group for books about Negroes, books related to matters of immediate concern, and books which emphasized sociological rather than economic or political problems. He found a low degree of interest in fiction of strong social significance.

Three significant studies concerned the general problem of reading attitudes. Seward and Silvers (68) investigated belief in the accuracy of

newspaper reports and found that the 209 college women whose reactions they obtained tended to believe propaganda attributed to American sources rather than enemy propaganda, good news rather than bad, and news adverse to its source. The extent to which readers' interpretations are conditioned by the attitudes they bring to their reading was studied by McCaul (53). He concluded that, among pupils in Grades VII-X, boys seem to be more influenced by their initial attitudes than are girls and that pupils tend to be more greatly influenced by their initial attitudes as they advance in grade. The effects of reading fiction upon the attitudes toward the Negro race of a group of southern white children were studied by Jackson (38). She found small, but significant, positive shift of attitude resulting from the reading of a single short story. These modified attitudes, however, proved to be transitory and reverted after two weeks.

Readability

Several studies reported during the period of this review were concerned with the broad aspects of readability. Some of these reports bore directly upon visual reactions in varying typographical situations; others concerned objective technics in the measurement of the relative difficulty of comprehending various reading materials; still others presented evidence on the relative contribution to understanding of contrasted materials.

Continuing a long study of the effect upon reading efficiency of such factors as type size, length of line, and illumination, Tinker (80) reported a study of illumination intensities for reading newspaper type and recommended a light intensity between fifteen and twenty foot-candles for newspaper reading. In another report (81), Tinker discussed, on the basis of new evidence, criteria for determining the readability of type faces. In collaboration with Paterson, he reported several additional studies of visual factors in reading various typographies. One of these reports (58) presented eye-movement data concerning variations in reading efficiency in optimal and nonoptimal typography. A study of the effects of astigmatism on the visibility of print (50) was illustrative of the continuing research reported variously thruout the literature of the period by Luckiesh and Moss.

Significant new technics were reported for the measurement of levels of difficulty in various reading materials. Lorge (49) offered a new formula for the prediction of readability. By this formula, grade level difficulty is computed on the basis of average sentence length, ratio of prepositional phrases to number of words, and the proportion of hard words. On the basis of a careful study of previously devised technics, Flesch (20, 21) pointed out shortcomings in commonly used readability formulas and presented a new formula in which sentence length, frequency of affixed morphemes, and frequency of personal references are used to estimate the comprehension difficulty of a given text. In an investigation of the reliability of sampling of reading material, Leifste (48) found that, to

determine the vocabulary difficulty of a book, a sampling of fifteen selected pages produced adequate results for practical purposes, altho greater accuracy is insured by sampling every tenth page.

Thru a study of the effect of amplification upon comprehension, Wilson (86) found that sixth- and seventh-grade pupils comprehend passages amplified to lengths of 600 and 1200 words somewhat better than they comprehend condensed versions of the same material limited to 300 words. Halbert (32) concluded that children get more relevant ideas from reading a story which is illustrated by pictures than from either the text or the pictures alone.

Of significant interest in the problem of textbook selection were the reports of Kopel (41) and Kopel and O'Connor (43), which set forth and demonstrated the application of twenty-five criteria for evaluating reading textbooks. These criteria are sufficiently comprehensive to serve as guiding principles in the evaluation of the reading program as a whole.

Vocabulary

Problems in the area of vocabulary development were the basis of several studies and outstanding publications. In 1944, Thorndike and Lorge published the latest culmination of their long research in vocabulary frequency, *The Teacher's Word Book of 30,000 Words* (79). This work has already become a basic tool of writers, publishers, and teachers in the preparation and grading of materials for children. Rinsland (62), by means of a nationwide sampling of the writings and conversation records of children in Grades I-VIII developed and published in 1945 "a basic vocabulary of elementary-school children." He found a total of 25,632 different words in a running count of over six million words. In that he used the primary source of children's own writing and speaking. Rinsland has very significantly added to existing tabulations of word frequency, commonly based as these are upon words used in children's books (written by adults) or in adult materials.

A highly important point of consideration relative to word frequency tabulations in general was statistically supported in a study by Davis (15). Despite their many uses, frequency ratings do not accurately indicate the difficulty levels of words. The frequency of its use is not a true index of the difficulty of a word.

Constructing and administering to a group of tenth-, twelfth- and fourteenth-graders tests designed to measure their precise knowledge of word meanings in context, Dunkel (16) concluded that the ability to use words precisely is as closely related to comprehension in reading as is vocabulary range. In a comparative study of two technics for teaching a reading vocabulary to first-graders, Pario (60) found no statistical difference between a quick perception method involving the use of meaningful context clues and a more conventional method.

Poston and Patrick (59), upon the basis of an evaluation of word and

picture tests for first- and second-grade pupils, reported wide differences which suggested that tests with and without pictures are not equally or similarly diagnostic. They recommended care in the use of word-recognition and word-meaning tests for the classification of primary-grade children. Gates and Carson (23) found that simple, inexpensive, and informal technics are as effective as expensive and elaborate mechanical devices for the diagnosis of ability to read by phrases or thought units.

In a study of the effect of instruction in mathematical vocabulary upon problem-solving in arithmetic, Johnson (40) demonstrated that mathematical vocabulary instruction leads not only to growth in knowledge of the specific terms taught, but also to growth in the solution of numerical problems involving the use of these terms. Vocabulary gains produced by direct teaching carry over with little loss for as long as two and one-half years. Miles (56) found in a study of vocabulary development at the secondary level.

Hill (35) reported interesting relationships between children's preferences among the various comic strips and the vocabulary of these strips. The vocabulary of the sixteen most popular strips, he found, was mainly in the easier categories—78 percent of all words used were in the Gates reading vocabulary for the primary grades; 79 percent were in the first 2000 words of the Thorndike list. There was, however, little relationship between ease of vocabulary and rank of popularity among the sixteen favorite strips.

A highly useful summary of the implications of army training experience for vocabulary development in regular school instruction was offered by Witty (88). The systematic procedures employed in the army literacy program, Witty pointed out, were based upon principles which have equal promise if consistently applied in regular school work.

Technics and Devices

Four studies were reported which add evidence on the effectiveness of technics in the development of reading ability, especially in the improvement of rate of reading. Westover (85) reported a comparison of the reading achievement of two groups of college freshmen. One group was given regular practice reading during two fifty-minute sessions per week for a period of five weeks. The other group read the same materials, but used a special mechanical device for controlling eye movements. Westover concluded that there was no significant difference in the reading achievement made by the two groups. Smith (72) obtained satisfactory results in the improvement of rate of reading by using a pacing technic of informing the students orally at the moment when each successive group of 250 words should have been read at a specified rate. Danner (13) found rhythmic auditory pacing useful to stimulate increased rates of silent reading.

Cason (10) studied the relative effectiveness of three methods for im-

proving speed of reading: free library reading, phrase-reading instruction, and the Metron-O-Scope exercises. She found, for a group of third-grade pupils, no important differences among the three methods. The very clear and pertinent finding that a highly touted mechanical device yielded no more significant results than regular free library reading made this study highly significant for teachers of reading and school administrators. Somewhat in contrast with this finding is the report by Simpson (70), who found no significant relationship between eye-movement data, obtained by the ophthalmograph, and weekly amounts of free reading reported by 419 college freshmen.

Programs

Successful reading development programs were widely reported. It was possible to review in this writing only a few of these reports which illustrate the types of programs conducted or summarize highly significant experience.

Goldstock (26) described the systematic continuous efforts of one elementary school to provide for the remedial reading needs of primary pupils. Guiler, Murphy, and Coleman (31) submitted new evidence of the effectiveness of special provision to meet the reading development needs of high-school students.

Community-wide emphasis upon the improvement of reading instruction was reported by Kottmeyer (44), who described the program which has been developing recently in the St. Louis schools. The integration of the reading program in the total pattern of education of the "community-school" was described at length in a report by Seay and Meece (66), based upon data growing out of "The Sloan Experiment in Kentucky." Particularly significant in this latter report was the description of the specific reading materials which have been developed to meet the specialized local needs and interests of the children in the "Sloan" schools.

The highly significant report of the Stanford Language Arts Investigation by Roberts, Kaulfers and Kefauver (63) described the cooperative efforts during a three-year period of 151 teachers and administrators in twenty-eight secondary schools to improve instruction in the total area of the language arts. Twenty-five classroom teachers presented discussions of successful teaching projects and experiences and provided pertinent source material for teachers of reading.

A somewhat discouraging commentary on the growth of reading programs among secondary schools and colleges was offered by Traxler (82) in a report of the provisions for reading instruction in secondary schools and colleges holding membership in the Educational Records Bureau. Despite the long-term emphasis upon the critical need for reading programs beyond the elementary school, only 29 percent of the 133 schools represented in Traxler's report made definite provision thru a developmental reading program to meet the reading needs of all their pupils and only

about a quarter of the schools had at least one teacher who gave half time or more to reading guidance.

Summary

With the war years past, students can whole-heartedly resume their investigations of the problems of reading growth. They will find, as the foregoing discussion reveals, a stable bridge of research across the war years, permitting the easier and more vigorous continuation of their inquiries, experimentation, and interpretations in this field of education.

Many unsolved problems yet challenge our attention and concern. Raising the literacy of the American people to the level of social power, eliminating in the lives of children those negative and retarding conditions which prevent them from growing to full adulthood in reading, and building systematic programs of reading development to function in every classroom, school, and community—these are the basic unfinished tasks for teachers, administrators, specialists, and parents. Significant research of the future must bear upon the key problems involved in these major areas of effort.

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CHAPTER II

Communication Skills: Composition, Listening, Radio, Speech, and Related Areas

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RESEARCH in this field during the last three years has suffered the fate of most areas of general or liberal education in the period. Altho there are a few areas which have been stimulated by the war, many workers in the general area of this chapter have curtailed research and its reporting while occupied with other types of wartime work. Workers in those areas especially stimulated by wartime demands have not yet published their studies in any great number. A few highly significant studies have appeared. But the reports reviewed here are for the most part conventional in content and method.

Factors in the three-year period which have had some bearing on the content of this chapter include reports on wartime teaching, publications which have arisen from concern over curriculums and the philosophies of education conducive to new programs, continued increase in the number of studies in various aspects of speech, new plans in the field of radio education, and investigations of listening as an important new concern in the field of communication skills.

The general plan of this report involves a three-fold division of the field. It should be noted that there is some overlapping of units in the areas of the classification. The first division includes the fundamental skills. Here reports are cited on such matters as the mechanics of writing, vocabulary, voice and articulation, and personal adjustment of the speaker. The second division includes investigation of types of communication activities such as radio, public speaking, journalism, and writing. The third division includes studies on factors such as teacher training, evaluation, wartime programs, and bibliographies. Altho research in reading problems is allied to the areas of communication reported here, such research is reported in Chapter I of this volume.

THE FUNDAMENTAL SKILLS

Mechanics of Writing

Most studies of elementary writing have stressed the development of mechanics. Mathews (108) investigated the relationship of reading to writing skills. Students who do inferior work in composition were reported as having poor reading ability. Training in reading not only improved reading skills but also appeared to influence growth in grammar and mechanics of writing as much as did specific practice and training in writing. The work of Wykoff (172) casts doubt on the assumption that writing skill can be evaluated only in terms of practical samples. His study indicated

that students with a knowledge of usable grammatical terms and principles of punctuation belong to a group which will write better themes at least 90 percent of the time than students with a smaller amount of such knowledge. Both of these reports point to the value of observing and understanding principles of grammar and punctuation in testing and developing these skills. Kaulfers (81) studied the need for a functional interpretation of grammatical principles. Carlton and Carlton (16) and Eaton (30) also reported data which show sociological interpretation of language achievement.

The intercorrelations of parts of the cooperative English test A: Mechanics of Expression, Form R was studied by Traxler (155) who recommended that separate scores should be computed on the parts—grammatical usage, punctuation, and capitalization—for purposes of diagnosis, reteaching, and counseling. Other error studies were reported by Rothenberg (131) and Lumsden (101). Karp's (79) study revealed greater value of individualized instruction for those who rate high on pretests of mechanics of English composition than for those who rate lowest on pretests.

Vocabulary

Two new major vocabulary studies have appeared. Thorndike and Lorge (150) have published an extension of the 1921 and 1931 Thorndike word lists. Rinsland (129), as noted in Chapter I, has published the first raw word frequency count for each grade. A study by Fossum (40) revealed no significant relationship of the size of the speaking vocabulary of college students with test scores of intelligence, vocabulary, or speech ratings. He reported a method of determining features of oral word counts and an oral word list of words most frequently spoken. Hargis (59) studied the vocabulary of radio programs. His study indicated a larger and more complex vocabulary is used in music, drama, educational talks, and news programs than is used in serial drama, comedy shows, and commercials which are broadcast.

The research of Gragg (53) and of Bolton (11) showed the effect of the study of Latin, French, and Spanish and of social studies upon English vocabulary. A study by Kasser (80) indicated that slang words had only a slight chance of persistence even in the language of an isolated institution and that a majority of such words originated with students of high-school age.

Morgan and Bonham (112) found that nouns are learned more easily than other parts of speech. Adverbs were found the most difficult to learn. Shannon and Kittle (135) and Witty (168) reported other vocabulary building studies. Hearing and reading vocabularies were reported by Burton (15) to differ significantly. Park (122) revealed that vocabulary plays a significant part in the comprehension of ideas presented in sound motion pictures.

Voice and Articulation

An elaborate study of some relationships between voice and personality was made by Duncan (29). The complex of vocal attributes was shown to have significant relationships to social adjustment as measured by standardized personality inventories. Voice quality appeared as the factor most closely related. The evidence clearly pointed to the value of a program for development of social adjustment in connection with voice training. Similar studies more limited in scope were conducted by Fay and Middleton (36) and McGehee (105). The study of Knower's (90) which continues his series on expression of the emotions shows definite relationship of the voice as an isolated factor to generalized skill in speech.

Black (8) demonstrated that speech training not only improves voice skill but also improves the ability to evaluate voice merit in speaking. Pronovost (127) reports useful technics for discovering one's best pitch level. The reports by Williamson (165, 166) indicated successful experience in improving nasality and hoarse voice. Wartime problems in the use of the voice and articulation were analyzed by Cooke (21) and Steer (140).

The study by Glasgow (51) led him to the conclusion that indistinct articulation caused a comprehension loss of 57 percent. Another way of stating this conclusion is that there was a 57 percent degree of indistinctness of articulation in this experiment. It is obvious that if the articulation had been completely indistinct, there would have been a hundred percent lack of comprehension. The study of phonetics was shown by Hester (69) to have value as a device in training readers. House (72, 73) concluded that the use of diacritical marks was an unsatisfactory manner of symbolizing speech sounds. Wilke and Snyder (164) made a nationwide survey of regional dialect preferences in the United States. They found a tendency to accept general American speech as the preferred dialect. Pleasant voice quality and distinctness of articulation were found to be important factors in any approved dialect pattern.

An outstanding publication of the period was Kenyon and Knott's (83) *Pronouncing Dictionary of American English*. Every student of articulation and phonetics should become familiar with it. Lynn (102) investigated the effect of bilingualism in articulatory skill and recommended a program for developing skill. Dow (28) surveyed usage in Massachusetts of variations of the short "O" sound. Three general studies of the bases of phonetic research which contribute to our understanding of the field were made by Funke (45), Pike (129), and Stetson (142).

Speech Correction

Johnson and Gardner (78) have critically reviewed the research on the handicapped in speech and hearing. Studies of the problems of children who do not talk were conducted by Rutherford (133). Cleft-palate cases

were studied by Wells (161). Hearing and speech were studied by Fowler (42). Johnson (77) and Nelson (121) analyzed the status of programs and analysis of cases of speech defects in military service. Speech correction programs have been outlined for public schools by Simon (136).

Reasoning—Semantics

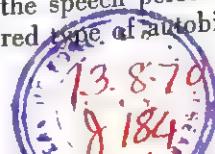
Language skills are commonly recognized as important factors in thinking; and conversely effective speaking, writing, and listening are dependent in part on thinking skill. The ability to do skilful thinking must also be related to the ability to collect facts. Wiles (163) found that two-thirds of his college students had difficulty in locating needed information. Morgan (113, 114) conducted a series of experiments designed to clarify our understanding of the way thinking processes operate. Higgins (70) and Grener and Raths (54) were concerned with some general classroom methods of teaching thinking.

Howell (74) studied the effect of debate training on critical thinking. He found that high-school debaters outgained non-debaters on tests of critical thinking. Anderson, Marcham, and Dunn's (3) study showed that the greatest gains in their project in teaching critical thinking were in the processes of drawing inferences and conclusions. Johnson (76) and Hall (58) were particularly concerned about the use of discussion methods in teaching reflective thinking. Johnson developed a test which was found useful in measuring achievement in such skills and as a teaching device. The problems involved in the discussion technic for thinking together are analyzed by Salt (134). A study by Knower (91) developed and analyzed a test of skill in organizing ideas. Bumstead (14) experimented with the effectiveness of various methods of memorizing.

Semantic variations in certain high frequency words were analyzed by Foster (41). Hayakawa (64) reported an analysis of the field of general semantics as an educational philosophy and method.

Personal Development and Adjustment

Gilkinson (50) and Murray (117) have analyzed an extensive body of literature bearing on the relationship of personality to achievement in speaking. Gilkinson (47) developed a social fears scale and used it to analyze some of the significant features of stage fright. In a later study (48) he found scores on the scale correlated significantly with characteristics of the speaking voice. The highest correlation was with the use of vocal force. He concluded that a generalized sense of inferiority operates as a primary cause of stage fright. Henrikson (66) reported that students are not skilful in analyzing their own cases of stage fright. Courses in speech materially reduce the tensions of most students in speaking situations. Thorn and Bryngelson (149) studied the use of nonstructural case history technic in analyzing the speech personality and concluded that it is not superior to the structured type of autobiography.



Poley (126) analyzed the problems involved in the teaching of English with the aim of developing maturity of personality. The report by Buckingham (13) was concerned with the autobiographical techniques in teaching writing.

Spelling

The investigation by Triggs (157) showed the importance of using diagnostic tests in analyzing the spelling needs of college students. Simpson (137) reported a new test for measuring spelling achievement. Clinical teaching procedures were reported by Guiler (57) who stated that all levels of mental ability were able to profit significantly from remedial work in spelling. In his review of the literature Horn (71) concluded that there is greater present need for studies in the application of known facts and principles than for further research for facts.

Linguistic Analysis

One of the principal studies of the characteristics of our language was in Mencken's (109) *The American Language: Supplement One*. The supplement is in effect a second volume equally as rich and stimulating as the original. Bloch and Trager (9) have contributed a systematic plan for linguistic analysis which should be studied by all who are interested in research in the field.

Radio

TYPES OF ACTIVITY

The impact of radio as an educational force is being widely subjected to study. Plans for the educational uses of radio are being developed in many places. A report which should be of help to the planner is presented by Summers (144) of the Federal Radio Education Committee. Levenson (99) has published an extensive analysis of the opportunities and methods of radio education. Another useful study of the problem has been published by Woelfel and Tyler (170). The research by Woelfel and Wiles (171) into the uses of the radio by teachers in four of our largest states has produced a list of 101 successful practices. Types of equipment needed for educational broadcasting were analyzed by Henrickson (68) and King (84).

Radio research reviews such as those reported by Lazarsfeld and Stanton (95) provide comprehensive pictures of the problems of educational radio. The studies by Whan (162) of radio programs in particular states have served as useful guides to broadcasters. Chappell and Hooper (19) have analyzed the techniques of radio audience analysis. Peatman and Hallonquist (124) investigated the patterning of listener's attitudes toward broadcasts. A detailed analysis of the nature and possible effects of the crime dramas was made by Rowland (132). Lazarsfeld's (196) study of the comparative effect of radio and the press led him to the conclusion

that under certain conditions radio proved more effective than the newspapers.

Public Speaking and Discussion

The two-volume set of studies edited by Brigance (12) is one of the most comprehensive and scholarly series of researches ever reported in the field. The early chapters on the history of the study of speaking are particularly useful in placing this educational activity in its historical perspective. Bender (7) has reported on the habits of speakers which are common annoyances. Henrikson (67) analyzed the characteristics of speakers reported as "good" and "poor." Moore's (111) study suggested that speech skill depends more upon general educational achievement and intelligence than upon personality traits. The devices by which the public speaker achieves successful emphasis were studied by Ehrenberger (32). The most effective simple device was found to be the use of the statement, "Now get this," before the statement to be emphasized. Studies in the teaching of discussion were carried out by Ewing (34), Hall (58), Howell (74), Johnson (76), and Salt (134).

Composition

A survey of the problems of beginning English classes is presented by Crawford (22). Wykoff (172) showed that a knowledge of the usable principles of grammar and punctuation is related to success in composition. Dow and Papp (27) reported no significant relationship between reading ability, language ability, and speaking ability. Low correlations were reported by Lemon and Buswell (97) between errors in oral and written expression in Grade IX.

Eaton's (31) study suggests that achievement in composition courses is not related to either the length of teacher experience or number of course hours devoted to composition study. Diagramming of sentences was revealed by Stewart (143) to provide no better mastery over sentence structure than directed practice of compositional activities. Roehm (130) provided suggestions for audio-visual methods of teaching language. Flynn and Corey (38) found the use of sound films a successful method of motivating the study of composition. Karp (79) recommended an individualized method for teaching superior students and a group method for the less capable. Witty (169) held that writing about vital personal experiences was helpful in helping the child overcome feelings of insecurity and tension over his writing.

Dramatics—Oral Reading

Gates and Carson (46) did research on the evaluation of phrasal ability in oral reading and found that the observation of experts provided a better test than complicated mechanical testing devices. Cunningham's (24) research revealed that rich rhythm patterns in oral reading are traceable

to linguistic elements and individual reader habits. The verse-speaking choir was shown by Harvey (62) to be a useful device for teaching voice and articulation. Timmons (151, 152, 153) reported a series of studies on dramatics. He found that participation in a play had measurable effects on the player's personality, and seeing a play resulted in significant changes in the attitudes of the listeners. Dietrich (26) found that the participation in school plays did not adversely affect the general academic scholarship of students.

Journalism

English (33) reported that readability was influenced by headline type. Casey (18) analyzed the needs of journalism students and outlined a curriculum. The graduate theses index by Swindler (145) will be very useful to anyone wanting to pursue the study of particular subjects or to trace the history of research in this field.

Informal Activities

Conversation has been subjected to analysis by McDonald (106) who reported factors related to conversational skill. Kramer (92) surveyed the activities which function in everyday living and recommended training in informal speech activities. The study by Fossum (39) related the speech needs of men in a variety of occupations. Fitzgerald and Knaphle (37) found that most of the difficulties in letter writing could be overcome by correcting a few simple mistakes.

Listener—Audience Analysis

There appears to be a new interest in this field, altho but few studies have been reported which bear directly on this skill. The analysis of problems by Sterner, Saunders, and Kaplan (141) is suggestive of the need for further study in this area. Ewing (35) devised and analyzed a listener index. Knower, Phillips and Koeppel (89) found listener skill was influenced by the effectiveness of speaking or reading. Lambert (94) and Lentz (98) published studies on the effectiveness of means of informing the public during wartime. Lentz (98) concluded that most opinion change is orderly and gradual. A project in the use of phonograph records as an aid to learning was published by Bathurst (6). The work of Long (100) indicated superior results were obtained from instruction in the Army where audio-visual aids were used. On the other hand Jayne (75) recommends a variety of types of presentation. He found that visual presentation alone does not produce superior retention of ideas. Knapp (85) systematized the research which has been done in the field of rumor.

EDUCATIONAL PROBLEMS

Teacher Education

A Harvard committee under the chairmanship of Morrison (116) engaged in an extensive analysis of the problems of secondary-school teacher

education in English. Recommendations were made for a better definition of the functions of English education, and for a five-year college program in teacher training.

Surveys by Chenoweth and Mabie (20) and McKelvey (107) collected evidence on teacher training and work in speech. Both studies revealed a need for a broad teacher-training program in speech rather than a highly specialized program in one of the divisions of the field. Morris and Huckleberry (115) described the type of educational program desired for the teacher of speech.

McCoard (104) furnished evidence on the relationship of speech skill to teaching efficiency. Significant differences were found between the speech of good and poor teachers. Moreover, good speech was found to be related to the process of getting a teaching position. A study by Henrikson (65) also attacked the question of the relationship of voice skills to teaching. His findings likewise confirm the need for vocal skill to achieve effective teaching.

Tests—Evaluation

The report of Knower (88) analyzed the complex process of securing useful diagnostic and evaluative indexes of speech achievement. Carp (17) carried on an investigation to determine the reliability and validity of teacher-placement examination in speech. In this carefully controlled study he demonstrated the need for expert judges and well-planned methods in any testing situation demanding exacting evaluations. The research of Thompson (147, 148) presented detailed data on the use of various measuring technics. Reasons for faulty ratings and methods of improving ratings were obtained. He reported the paired-comparisons method of rating as better than the rank order method and recommended simple rating devices as better than complex ones.

Specific measuring devices were developed and analyzed in a number of studies. Laase (93) indicated the quality rating system in debate proved a more reliable index of achievement than a win and loss system. Gilkinson (49) found the Seashore Test of Musical Talent of little value in measuring speech achievement. Knower (90, 91) developed specific tests of skill in the use of behavioral and tonal symbolism, and of the ability to organize material. Tenney (146) described a technic for measurement of speech on recorded film.

Traxler (155) carried on research to determine the value of scoring an English test for parts of the complex process of writing as well as for the test as a whole. He concluded that part scores would be useful. Evidence was presented by Averill (4) to show that the greatest value of English tests lies in the field of individual diagnosis. Hartog (60) showed that compositions should be judged for purpose and adaptation to reader. A study by Weber (160) dealt with the value of examination scores in Latin, French, and science compared with English in predicting college

6. What is the comparative value of instructional emphasis on the narrow mechanical skills of communication and the broader general educational objectives of this area?
7. What is the evidence on the comparative value of integrated instruction and specialized instruction in the types of communication in the area?
8. What is the best grade placement for various types of objectives in teaching communication skills?
9. How can instruction in communication best be adapted to individual differences among students?
10. What steps should be taken to prepare teachers better for their instructional responsibilities in teaching communication?

The studies reported in this review have contributed to our understanding of these problems. But in no case is the evidence satisfactory or complete. It is hoped that the next review of research in this area three years hence will reveal substantial progress toward practicable answers to these questions.

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CHAPTER III

Teaching Techniques in English

PAUL A. JONES

THE PAST two years have been fruitful ones from the standpoint of articles and books published on the subject of teaching English. Literally hundreds of them have appeared in published form; however, the number is comparatively small that deal with technics of teaching this subject. It is to some of this smaller group of publications that this summary will be confined, supplemented by the personal knowledge of the writer of the Navy's educational program.

The General Field

The Bonds (2) have presented a summation of the many researches that were conducted up to 1943 on the problems and technics of teaching reading. This study, designed to call the attention of teachers to the findings of many researchers, succeeded in its dual aim of not only calling attention but also suggesting a device for selecting from this vast field a program which could be easily executed.

Using the Bonds' book as an excellent starting point, the teacher of literature for younger students will find that Jones (7) has made a contribution to expository writing when he lists approximately eight hundred topics upon which students may write. Jones (7) uses several devices to aid the teacher in presenting the material; some of the topics consist of a title only, others consist of paragraphs containing helpful suggestions, and each group of topics is accompanied by an introduction which may be used for purposes of motivation.

The Secondary Field

Pooley (12) has written an article which advocates articulation between high-school curriculums and citizenship. He maintains that high-school curriculums should not be dominated by college entrance requirements and suggests that continuity between high-school and college English courses will make for better articulation and satisfaction. As a means of bringing about this articulation he recommends: (a) a committee to study standards and the means necessary to accomplish them; (b) a group of colleges to prepare a statement of what they want from their entering students; (c) college instructors to visit periodically the high schools in the vicinity; (d) colleges to form a theme-evaluation team to be of service to the high schools; (e) a method to be devised to measure the outcome of sound English instruction; and (f) include annually in a college staff at least one experienced and qualified high-school teacher of English.

Sandin (16), in a plea for better understanding between high schools and colleges, states that the reason why a number of high-school graduates enter colleges without comprehension of the written or spoken language

beyond the sixth grade level is due to the overloading of English teachers in preparatory schools. He says that as long as "penny pinching school boards . . . demand that a teacher of English . . . carry a load running from 120 to 200 pupils, we may expect high-school students to be virtually illiterate."

The College and University Field

A plea for freshman scholarship is made by Wynn (25) as he calls for actions and thoughts to be related, for one's own thoughts to be used to weigh and compare the thoughts of others, and for reasoning to be the one basis for forming, holding, or changing opinions. Arms (1) comes to the defense of the research paper when he states that it is a real center of freshman English in that it gives an opportunity to set up a problem and find a solution.

Stewart (19) describes a course now offered to freshmen who score below the thirtieth percentile on the Nelson-Denny Reading Test and advocates that: (a) transfer be made from the formalized presentation of a skill to the students' regular work; (b) practice be given in the basic courses; (c) instructors be permitted to go beyond the skills presented in workbooks and the students be taught to use the whole book; and (d) class morale be raised by having the major portion of the work in the class devoted to the students for their regular assignments. For better composition work Thurston (20) writes of a special English class for upperclassmen which is required prior to graduation. Thurston expresses appreciation of the fact that such a course may be impractical, and suggests that an alternate may be had by deferring one semester of freshman composition until the senior year.

An optimistic note for English in general and literature in particular is sounded by Wardle (21) when he states that engineers themselves have begun to realize that they will be better engineers if they are better-read men. Harbarger, et al (5), goes further than Wardle and recommends a course of study in English for engineers which would be divided into two parts. Part I reviews the basic skills for effective writing, and Part II directs practice in the appropriate special forms.

On a lower note Hulton (6) points out the numbers of adult Americans who are dissatisfied readers. She states that the dissatisfaction may be due to one or both of two types of complaints: (a) Their eyes may bother them when they read, or (b) their reading speed and comprehension is inadequate for their needs. Fortunately both of these complaints may be corrected thru proper treatment and training.

Marshall (8) discusses the possibility of predicting success in freshman English thru the use of three tests, and comes to the conclusion that no accurate prediction is possible. He points out, however, that none of the scores is low and all three are so nearly alike that they are important. The tests used are: Psychological Examination, Language Aptitude, and

Shepard English Tests with correlation scores ranging from .384 to .438.

"Illustrious as one author may be, there are others worthy of attention," says McCloskey (10) as he deplores the word-by-word examination of various pieces. Calling for its elimination he cites examples of the stultifying effect as the outcome of this type of teaching.

The Armed Forces Field

Rodman (14) calls the period between the wars one that is singularly rich. Perhaps one should go further and include the war years in this "singularly rich" period. Because, despite the interruption of educational plans of hundreds of thousands of young men and women, the war years have left their imprint upon all educational institutions in this country—an imprint which will be felt for a number of years to come. Rowe (15) states that the response of the students themselves, due to their background of intensified experiences, has contributed materially to the study of Shakespeare.

Authorities in the Army training program at the University of Minnesota, according to Smith (18), asked that straightforward, thoughtful, presentation of ideas be given first place in composition and that clarity in the progress and organization of ideas be insisted upon. Boys (3) describes a pre-induction course designed for sixteen- and seventeen-year-old boys who had completed at least three and a half years of high-school work with a better-than-average record. The curriculum was made up of mathematics, physics, American institutions and history, and English. The entire curriculum was coordinated and all mathematics, laboratory, and history papers were looked over by the English instructors. In another article, this by Hatfield (4), is described how accuracy of expression or clearness should be stressed and conventions of language should be de-emphasized. Pointing out the desirability of coordination between departments he tells of the enthusiastic response received at the University of Chicago upon the fusion of English and history courses.

"Communication consists of writing, speaking, and reading, the three skills functioning together," Redford (13). It is pointed out that students, even when they have received training in notable colleges and universities, were weak in the fundamental skills of communication and in the coordination of these skills. Little or no training in vocabulary-building and reading comprehension was evidenced in innumerable cases studied in an army training program.

Due to the fact that the War and Navy Departments had emphasized the need for "clear and accurate expression," Aubrey Douglass appointed a committee to study curriculums in the California Educational System, according to Sensabaugh (17). This committee, composed of English teachers from primary grades thru university, was divided into subcommittees on speech, composition, and literature. The aims formulated by the committee were: Composition and speech should develop clarity of

thought, and literature should keep alive the memory of those ideals and values which have animated the best minds of the present and past.

Weigle (22) tells of teaching English in an Army Air Force College Training Program, and lists the objectives of the course as: (a) development of the ability to write military reports, instructions, directions, and surveys; (b) development of speech technics used in military situations; (c) development of correct grammatical usage in writing and speaking; (d) development of reading skill and comprehension; (e) development of vocabularies in all phases of preflight training; and (f) development of note-taking technics. The course was divided into three units: speech, composition, and grammar.

An analysis of experiences gained from an army English class by Wykoff (24) shows the following results: (a) Sectioning system used by the Army was not effective because too low a cutting score was used. (b) Time element allocated by the Army did not allow sufficient time to cover the subject. (c) Place of grammar in course was not good as all students, regardless of proficiency, were required to take the subject. (d) Reading program of the Army was superior because of thoroughness. (e) Comprehensive examination system used by the Army is worthy of consideration by civilian educators.

It would be unfair to pass on to another phase of this summary without making reference to Wiles, et al (23) and Peace and Wiley (11). The first named, a group of army officers, authored *English for the Armed Forces*; the latter, two naval officers, wrote *Navy Correspondence and Report Forms*. Both books are standard texts for their respective branches of the armed forces and will, undoubtedly, remain on the "required list" for some time to come. Both stress clarity and, altho somewhat esoteric, carry examples of accuracy and straight-forward presentation.

The Literacy Field

The Army's "Private Pete" has become a well-known figure in all army camps where training of nonreaders has taken place. It is to be regretted that this material is marked "restricted" by the War Department as a number of civilian educators are extremely interested in the methods used by the Army to teach large numbers of nonreaders to read, write, and solve arithmetic problems.

The Navy's program is also "restricted"; however, enough has appeared of unrestricted nature to warrant some discussion. During the last two years of the war the Navy carried on a special project in the field of literacy training. Prior to World War II the Navy had never been confronted with the problem of teaching its personnel the fundamentals of reading, writing, and arithmetic. With Selective Service, however, and the induction of men with little or no schooling, it became necessary to set up a program designed to instruct recruits in these subjects with the object of bringing them up to the fourth grade level. The broad purpose was to fit each man

to perform his duties in the Navy more effectively. To this end the following materials were published: *Navy Arithmetic*, *Navy Life*, Books I and II, *Navy Life Reader*, Books I and II, a teacher's manual and comic books.

Because the student personnel in the program was made up of adults, the Navy's procedure in teaching them differed somewhat from the conventional methods used in primary schools for teaching children to read and write. In the text-workbook, *Navy Life, Book I*, for example, emphasis was placed on phonic spelling and word meaning. Amply illustrated, its subjectmatter facilitated recognition of words which were already a part of the student's oral vocabulary. In *Navy Life, Book II*, the emphasis was gradually shifted from phonic elements to syllables, and from pictures to context for clues to word meanings. *Navy Life Reader*, Books I and II, which closely paralleled the vocabulary development in the workbooks, provided basic reading with frequent word repetition. This word repetition built up the student's vocabulary by what might be called a process of gradual accretion. Finally, the supplementary reading material capitalized on the powerful appeal of comic books, McCarthy and Smith (10), by presenting certain well-known comic strips with the vocabulary adjusted to the difficulty level of *Navy Life, Book I*.

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CHAPTER IV

Teaching Foreign Languages

WINTHROP H. RICE, with the assistance of HELEN BOGDON

THE SELECTION of items to be included in this report has been very difficult. Reduced space and great activity have made the omission of many truly significant titles a necessity. One topic in particular has come to the fore during the period covered, and a complete listing of all titles pertaining to it would run well over one hundred and fifty. This is, of course, the Army Specialized Training Program (ASTP) language (and area) program and the offshoots from it, the "intensive" type course, the "Army Method," and the like:

Bibliographies

In the April 1943 issue of this REVIEW, Tharp (233), Gamer (82), and Bond (18) reported the activities in the field of foreign languages for the three years preceding the period covered here. Machan (148) and Rice (200) prepared annotated bibliographies of modern language methodology in rather complete fashion, while Powers (194) gave a selected series of references. Among the more serviceable special bibliographies devoted to special topics three are particularly helpful: Grace and Harry Kurz (133) analyzed French textbooks over a five-year period; Pane (173) listed translations of Latin American books; Stanley and Neill (226) listed articles on Latin America.

Reports

Most of the items which might be included as reports dealt with matters of theory and practice as well and are listed under other topics. The results of meetings in California, Ohio, and New York were reported by Reinsch (199), Tharp (234), and Kurz (135, 136). Gossman (92) gave information on foreign language requirements for college entrance, Cheydleur (32) reported on the use of placement tests, and Fischer (71) gave data on language election in relation to general intelligence. There were also reports dealing with specific languages. For German, Stroebe (230) reported on the teaching of that language at Vassar College since 1905, and Wooley (253) analyzed the ups and downs of German teaching over a fifty-year period. Pitcher (192) and Doyle (62) reported on the teaching of Spanish and Portuguese, while David and Doyle (46) and d'Eça and Doyle (49) reported on the treatment of Latin America in language textbooks for Spanish and Portuguese classes. Doyle (60) also listed a complete calendar of inter-American events, holidays, and the like. The teaching of English as a second language was reported on by Reindorp (198) and Silva (220). The work of the Foreign Language Week in the Washington, D. C. public schools was described by White (246) and that of the first Spanish Language Institute in Mexico City by Smith (222).

Girard (88) analyzed the work of the first three years of the National Information Bureau of the American Association of Teachers of French.

Values, Aims and Objectives

While, of course, a great many of the articles dealing with the ASTP discussed objectives along with other matters, some writers treated the question independently. Berrien (8), starting from recent criticisms of language-teaching, argued for revised objectives in a changed world. Johnston (113) used a specific institution to show how new objectives can be attained by revised methods. Engel (70), Jones (116), and Justman (121) found the study of foreign languages of great importance from the social standpoint. Diez (58), after cautioning against trying to do too many things at once, outlined a plan for the achievement of the various objectives one after another. Believing that the two-year course must have limited objectives, Blake (13) discussed what they should be in the light of possible attainment.

The function of foreign language study in wartime and in peacetime after the war came in for a good deal of discussion. Among the best exposés of the importance of foreign languages during the war were the treatments by E. Cross (41), Danton (44), Duggan (63), Elliot (69), Mapes (149), and Rivers (206). Pei (186, 187, 191) brought the discussion to bear on specific languages and showed the importance or position of them in relation to the total picture. Others, discussing the relationship of languages to postwar needs, stressed various points. De Gaetano (50) considered languages as a means toward democracy; Freeman (76, 77), Girard (87, 89), Pei (188, 190), Skinner (221), and Tharp (235) were in agreement that foreign languages are an important means of fostering international amity, a point directed specifically to Latin American relations by Downs (59) among many others. In most of these discussions, means of attaining the desired objectives were mentioned, with most of the stress on languages for use. Darbelnet (45), assuming postwar importance, stressed the need for a psychological readjustment in language-teaching aimed at the expression of feelings as well as of ideas. Actual vocational or professional uses of foreign languages were described and listed by Bishop (11) and Ring (205).

The question of whether French or Spanish should be the most studied language was raised by Foley (73, 74), who regretted the trend away from French. Autret (5, 6) and Withers (251) expressed what is probably a majority opinion in defending the necessity of both languages and even stressing the fact that they are of mutual assistance.

Teacher Training

Few items appeared during the period here covered devoted primarily to teacher training. A large number, however, stressed in passing the need for better and different types of training to meet the new situation. Potthoff

(193), in a bulletin dealing with teaching combinations, aroused objections from Pargment (174). This discussion was not brought to an end by Pargment's answer so that the conclusion was not definitive. Owens (170) listed certification requirements in seventeen states and offered some suggestions for improvement. The preparation of college teachers, a greatly neglected topic, was discussed by Pargment (177) who felt that the college teacher should be as carefully trained professionally as the secondary-school teacher. Kurz (134) felt that teachers in service could improve their training by greater attention to professional literature. A suggested means of evaluating the efficiency of teachers was described by Cheydeleur (31) as the result of a long-time study and analysis of statistical data.*

Culture and Correlation

The matter of cultural content in language courses has long been an important one. This was viewed from many angles. The study of literature as a practical matter was stressed in a special report of the Commission on Trends in Education of the Modern Language Association (155). Whereas the previous item dealt with both high-school and college work, Friederich (80) examined the question of comparative literature in colleges and found it wanting. He pointed out the benefits of such studies and offered suggestions for improving the situation. Jordan (119, 120) discussed the possible application of "area" work to regular college courses in Brazilian Portuguese and German, and Johnson (111) gave two sample units on French culture to show what can be done in the high school. Also dealing with cultural relationships in the study of French were articles by Freyss (79) and Leland (140). The importance of inter-American cultural relations was brought out by Berrien (9) while Padín (171) gave a picture of the position of Latin American literature in our schools. And, finally, the American Council on Education gave out the report of a special committee on Teaching Materials on Inter-American Subjects (2). This extensive report analyzes the way in which Latin America is depicted in teaching materials in all subjects and on all levels of instruction. (For the treatment in Spanish and Portuguese textbooks, cf. 46 and 49.)

The Use of Radio in Teaching

The use of radio programs as a means of practicing audio comprehension was discussed as part of many articles analyzed in other sections. This pertained particularly to broadcasts emanating from Canada, Latin America, and Europe. Atkinson (3, 4), however, described efforts to give foreign language lessons over the air by a few American public school systems and several colleges and universities. Institutions with radio facilities could

*One work, omitted from the original manuscript, should have been included in this section. It is: Doyle, Henry Grattan and others, *A Handbook on the Teaching of Spanish and Portuguese*, prepared under the auspices of the American Association of Teachers of Spanish and Portuguese and the Office of Inter-American Affairs. Boston: D. C. Heath & Co., 1945. 395 p. This book offered teachers of these languages a mine of information on all matters dealing with instruction in them. The final chapter listed sources from which teaching materials of all kinds can be secured.

well attempt more along these lines. Reindorp (198) showed how successfully a radio course in English was conducted in Costa Rica and offered suggestions which might be applied in the United States. Clements (34), in describing the activities of "Radio Boston," illustrated possible educational activities on an international scale. The field of the use of radio in language teaching is obviously still in its infancy.

Curriculum

There was some discussion of general curriculum questions. Spurr (225) and Liedke (144) reviewed the history of language teaching and advised caution in accepting blindly the new trends before they had been thoroly tried and tested. Eckelberry (67) studied the language situation in higher education and noted a sharp increase in courses stressing the practical as against the literary side of the work. Huebener (108) considered the newer trends as applied to the secondary school; he found that the purely conversational aim of the ASTP was not valid for this level. He suggested increased time allotment for language study, some increase in conversation but without sacrifice of the cultural elements. Jackson (110) offered a revamped language program for New York City with a return to the four-fold aim, more time, smaller classes, and abolition of the Regents examinations as at present constituted. An example of a correlated college language curriculum was given by Dean (48); in this curriculum, the work of various departments was coordinated. Lindquist (146) sought to establish the source of forces militating against effective language teaching. She showed that a good deal of the fault lies with administrators who refuse to allow the time and facilities for this effective work.

As an aid to teachers in organizing their work, the *Modern Language Journal* instituted a series of specimen lesson plans. In the introduction to this series, Rice (201) gave a general statement of unit lesson planning in modern language teaching.* As the first specimen, a unit in general language was offered by Lindquist (145). Maronpot (150) discussed the use of unit organization in providing for individual differences.

Increasing interest was shown in the teaching of languages in the elementary school. One writer, Rindone (204), went so far as to label foreign language learning in childhood as a "must." The teaching of Spanish in the grades was enthusiastically described and discussed by Mays (151) and Earley (66). Rebolledo (196) mentioned certain problems involved in the elementary grades of the Southwest and suggested different instruction for English-speaking and Spanish-speaking children. Kurtz (132) advocated more reading in the language classes in the grades and offered suggestions as to how this could be done. Wilder and Phillips (248) de-

* Most of the units appearing within the period here covered are mentioned under their specific headings. Units appearing after September 1945 include: Inductive Grammar, Remedial Grammar, Inter-American Education, Correlation of Italian Language with Cultural Content, and Use of Audio-Visual Aids.

scribed an experimental Spanish club of fifth-grade boys which produced good results. Ginsburg (86) outlined the new Spanish program for Los Angeles which operates on all levels from the kindergarten thru the junior college. Altho most of the activity in the grades seemed to involve Spanish, one French program for ten-year-olds was described by Hibbard (102). The principles involved apply to any school group of the same age.

The twenty-fifth anniversary of the "Cleveland Plan," instituted by De Sauzé, was the occasion for several treatments of this plan. Among the best and most informative were articles by McClain (167, 168) and Pucciani (195). Flores (72) advanced suggestions for correlating Spanish and English to the mutual benefit of reading in both languages. Brozak (23) analyzed the status of Slavic studies in America, including language, literature, history, economics, and the like, in the study. The stress seemed to be on Russian, altho other Slavic languages are being taught.

It seems best to analyze writings on specific phases of language study before introducing the question of the ASTP, for much that has been said of the latter can best be grasped in the light of the discussion of the former topics.

Pronunciation and Conversation

The function of the conversational approach was, of course, one of the chief points in all the discussions of the ASTP, and the arguments for it properly belong to that section. However, the complete preëminence of this approach in the usual high-school class was questioned by Huebener (107) who felt that, altho important, conversation should not be allowed to supplant broader cultural and educational aims. On the more passive side of aural comprehension, Bodier (15) suggested a short-term course devoted solely to this aim. The instructor's activity was in the foreign language (except for explanation) while the students gave their answers in English in order to show comprehension. Pei (185) described an experiment in conversation with a group trained primarily for reading and found the results encouraging. Snow (223) suggested the use of a semi-direct method for teaching Spanish with the use of English to control comprehension. Courses in conversational German were described by Holzmann (105) and Jordan (121).

Much was done on the teaching of pronunciation, especially in French. Pei (189) offered suggestions for the teaching of sounds in many languages, basing his suggestions on imitation of native speakers. This would serve best for advanced linguistic students rather than for absolute beginners of high-school age. Funke (81), on the other hand, discussed the use of phonetics under similar circumstances where, he believed, a technical phonetic knowledge would serve as an aid to learning unfamiliar sound patterns. Condoyannis (36) and Wheatley (245), writing on German and French respectively, stressed the caution necessary in using English equivalents in discussing foreign sounds. They pointed out that local

and individual variations in English (American) pronunciation destroy the validity of many common comparisons.

On the technical side of French pronunciation, Myron (164) offered practical suggestions for avoiding an American accent in pronouncing French. Goddard, in a theoretical treatment (91) and in one of the specimen unit lesson plans (90), discussed and illustrated the teaching of French pronunciation to beginners. The suggestions offered were highly practical while using the phonetic alphabet as a basis of instruction. Delattre (51, 53) discussed the effect of the syllable on sound in French; he also (55) gave an extensive treatment of the difference between "graphic" and "phonetic" pronunciation for the benefit of students who, having begun on an oral basis, take up the question of spelling. The benefits need not be confined to that group. Denkinger (56) advocated a departure from the traditional arrangement of the vowel sounds in French teaching in favor of a system wherein the nasals become the basic element for grouping the sounds. As an example of the use of records in teaching pronunciation, Delattre (52) analyzed a recording of Maurice Chevalier and showed how it could be used to develop accurate aural analysis. Davis (47) discussed the question of the off-glide after final voiced consonants in French and suggested special symbols for their transcription. One author, Duncan (64), advocated the use of phonetics in the teaching of Spanish.

Vocabulary

Several studies of vocabulary, both general and specific, were made. Liebesny (143) suggested that vocabulary learning be made enjoyable by means of historical and semantic discussions. Jones (115) suggested that idioms not be set off as a separate category but be included in the course as vocabulary. Stevens (227) complained that textbook writers in Spanish often fail to warn students against false cognates—a thing equally true for other languages. Dealing only with the development of passive vocabulary in German, Wooley (254) presented a list of eighty word-families as a suggested means of expanding the student's ability to recognize meanings in reading. Seibert (219) described an experiment on the guessing of word meanings from context and also gave a sample lesson involving principles derived from the experiment.

The list of word counts available to students and teachers was increased to include Brazilian Portuguese. Following the system of most other such compilations by listing the words according to range and frequency, Brown, Carr, and Shane (21) produced a graded word book of Brazilian Portuguese containing over nine thousand entries.

The composition and use of dictionaries were treated by Kaldegg (123) and Henninger (100). The former discussed typical shortcomings of bilingual dictionaries; the latter advocated more training in the use of dictionaries and offered a series of "do's" and "don't's."

Several specialized vocabularies were treated. Peacock (183) pointed

out frequent foreign words in everyday reading material and suggested that they be collected by pupils and used as a basis for word study. Koenig (130) collected a large number of German words used in news reporting during the period 1930-1941, and Thompson (237) found that French was the chief source of military terms in English. These showed the continual interaction of languages upon one another. For those interested in aviation, Huebener (106) listed one hundred air terms in English, French, and German, while Rosaldo (210) compiled a similar list for Spanish and Portuguese. Rosaldo (211) also compiled a medical vocabulary in Spanish and Portuguese. Jones (114, 117) offered treatments of bridge-playing and sports which contained many essential vocabulary items. Walsh (243) discussed the use and effect of diminutives in Spanish, illustrating a point which is too frequently neglected by textbooks.

Grammar—General

The consideration of grammar from both general and specific standpoints was rather extensive. Many new approaches to the analysis and teaching of grammatical points were offered. General treatments are discussed here first, and treatments of specific points are then listed by languages. Much stress was placed on functional grammar as opposed to formal grammar. Pargment (175) stood for the functional approach, tending to reject formalized grammatical discussion and translation exercises. He showed how grammar can be made more profitable thru contextual exercises. Kaulfers (125) also stressed the element of availability for use in the treatment of grammar and illustrated this instrumental use for conversational purposes in a unit lesson plan (126). The psychological principles of learning as applied to grammar study were analyzed and illustrated by Ehrlich (68) who advocated departure from traditional types of examples and exercises. Coutant (39) went beyond the mere learning phases and discussed the development of reflective thinking thru the directed transfer of the analysis of relationships.

Of somewhat narrower, tho still general, implication, Bolinger (16) discussed some of the shortcomings brought about in Spanish grammars by the attempt to be brief in the presentation of grammatical elements. This, he said, often leads to either error or confusion. This criticism need not be confined to Spanish grammars. Rice (203) took occasion to disagree with the point of view that grammatical terms are difficult and undesirable. He recommended reasonable use of such terms based on meaningful definitions. Le Coq (139) regretted that more attention has not been given to the proper treatment of the passive voice, a construction with which American students often have a good deal of trouble.

Grammar—French

Various constructions in French grammar were analyzed. Palamountain (172) presented an illuminating discussion of interrogative usages based

on examples from a variety of sources. He came to conclusions which would amend previous ideas on the relative frequency of various alternative forms. Parker (179) considered the question of the quality of the "H" in Hitler and found wide variations; Liebesny (142) expanded the question to include all proper names and concluded that, in general, "H" in names of Latin or Greek origin tended to be mute, in names of Germanic or English origin it tended to be aspirate. Parker (180, 181) also discussed article (and prepositional) usage with modified feminine geographical names and article usage with the names of languages. Lancaster (137) added an amendment to the usual statements concerning the "*faire faire*" construction by showing that the pronoun of a reflexive infinitive is direct object under all conditions if it is direct object in the first place. The various constructions (infinitive, present participle, or clause) possible after verbs of perception were analyzed at great length by Hatcher (99), while Bissell (12) considered a combination of this and the "*faire faire*" construction, with most of the attention paid to the latter. The psychology of the subjunctive in both French and Spanish was treated by Rice (202) who would classify all uses under the heads of two implications: emotion and lack of certainty. The relative frequencies of all grammatical constructions were set up by Clark and Poston (33) in the *French Syntax List*, patterned after the similar list for Spanish published by the Study. Vittorini (239) examined the uses of prepositions before the infinitive in the romance languages and recommended that students strive to get the "feel" of these rather than to set up any mechanical rules.

Grammar—German

A call for the preparation of a descriptive grammar of living German was issued by Coenen (35) who suggested that this be done as a cooperative venture utilizing all means and agencies possible. The question of the subjunctive came in for some discussion: Willey (249) and Condoyannis (37) dealt with matters of nomenclature as a means of simplifying treatment of this topic; Schroeder and Loose (217), in addition to objecting to current terminology, advocated more reference to similarities in English in order to clarify the problem in German. Basilius (10) treated the topic of noun plurals, classifying them on the basis of their qualities as monosyllables or polysyllables.

Grammar—Italian

The only treatment of a construction specifically involving Italian was Luciani's (147) discussion of model auxiliaries. In this discussion, much attention was given to uses not ordinarily included in grammars, and many comparisons with English were made.

Grammar—Spanish

The chief topic of discussion in Spanish seemed to be *ser* and *estar*. Bolinger (17) commenting on previous treatments of the question, added

the idea of subjectivity as applied to the subject as well as to the attribute. Moellering (157) went further and suggested that the concept of "crystallization" be attached to *ser* and that of being "phaselike" to *estar*. Both of these, naturally, deal with the usage in connection with predicate adjectives. Bull (25) discussed another phase of the use of *estar*, this time in relation to *haber*: *estar* would be used for the location of a grammatically definite entity, *haber* for one grammatically indefinite. An outstanding contribution to the study and understanding of Latin American syntax was made by Kany (124). In this compilation, the author listed by countries variations in syntax from peninsular Spanish, and numerous examples reinforce discussion.

Reading

With the greatly increased interest in other phases of language study, particularly conversation as illustrated in the ASTP type of work, it was natural that the discussion of reading should have been somewhat less than in previous periods. There were, however, several excellent discussions of the topic outside the treatments of the ASTP. Pargment (178) discussed the nature of reading which should, he said, be "direct." He gave many detailed suggestions as to content and method and showed the contributions of grammar, vocabulary, and the like to reading. Koch (129) wrote along much the same lines with the added suggestion that teachers receive special training in reading work. Another writer on this topic was Jones (118), who combined the question of reading with that of speaking, basing his ideas on the statement that the former does not preclude the latter. This idea was the chief point of Hocking (103) who developed the thesis that without good pronunciation good silent reading is impossible. He looked upon reading as silent expression. Blayne (14), on the other hand, would separate the work in silent reading from oral reading, but still suggested oral work in the form of questions and discussions. Hammer (97) suggested similar activities as a means of enlivening work in scientific German; he advised the use of visual aids, recordings, comprehension exercises in English as well. An experiment on the effect of planned vocabulary study on rate and comprehension of reading was conducted by A. Z. Moore (159) who found that such planning was desirable and effective.

The question of extensive versus intensive reading was examined by A. Z. Moore (158); the results as tabulated seemed to favor intensive reading as giving better growth in vocabulary and reading technics. Unit lesson plans in the two types of reading were presented: intensive by De Sauzé (57) and extensive by Tharp (236). Coutant (40) discussed the position of free reading and felt that time should be allotted for it from assigned periods. He also suggested lists of such readings for French and German.

A single writer dealt with translation. Myron (166) disapproved of reading for content and stressed the necessity of careful translation from

French (or other languages) to English. This translation, however, must not be of the literal, word-matching, deciphering type. The final English result must be on a par with the quality of the original.

Koch (129) discussed the difficulties of teaching literature. He considered the problem of the choice of texts which should be selected for their intrinsic value rather than because they are favorable to certain points of view.

Audio-Visual Aids

Most of the discussion of this topic—again outside the realm of the ASTP—had to do with audio aids, mainly the use of the phonograph. Bottke (19), Carter (29), Delattre (54), and Whitehouse (247) described laboratories or workshops wherein the chief instrument of instruction or of exercise was the phonograph. The machine was used both for original instruction in pronunciation, vocabulary, and syntax and for drill and remedial work with the student actively participating in the procedure. Cahnman (26) described an experiment in which an audio-visual method was used in the teaching of several languages. Suggestions for wider application of this type of work were made.

Testing

Among the few items on testing, the most original was presented by Kaulfers (127) and by Sandri and Kaulfers (213). This test was designed to evaluate not only aural-comprehension but also oral fluency by measuring readiness to perform in lifelike situations. The only draw-back seems to be that only one individual can be tested at a time and hence a large group of examinees would require either a long time or a large corps of examiners. But this is an administrative matter and does not affect the value of the test *per se*. The use of standardized tests was described by Ghigo (83). Given in written form to groups of aural-oral trained students there was no apparent discrepancy in relative standings in the different types of work. Stroebe (239) suggested the preparation of standardized test recordings for aural comprehension. These would be available first as tests and later as practice exercises. The objective form of standardized tests should be adapted to individual tests and quizzes, according to Kurath (131). This form of test or quiz would save time for both teacher and student as well as provide objective bases of evaluation. Cheydeleur (32) and Giduz (85) discussed the use of placement tests at their respective universities. The program described by the former was especially elaborate and offered some impressive findings on the questions of prognosis and placement. Milligan and Bottke (153) compiled errors in pronunciation in first- and second-year students on the basis of a special test. The results showed fewer errors among girls than among boys, and fewer in the "star" sections than in the lower sections.

ASTP, "Intensive" Language, etc.

Most diffuse and varied were the treatments of the effect on language teaching of the work done in the areas and language courses of the ASTP. A complete listing of items can be found in the annual bibliographies of the *Modern Language Journal*; the first to contain them appeared in May 1945 (200) and subsequent ones will, of course, continue to list them. It would be impossible to list here all the descriptions of such courses and civilian equivalents as they are instituted in increasing numbers. This listing has tried to combine the discussions into as compact a form as possible and many excellent and interesting items have perforce been omitted. Essential articles embodying general agreement have been listed together without any attempt to refer the reader to the individual sources of individual ideas—this would have led to great confusion. Furthermore, specific references to special topics have been reduced to a minimum in order to keep this report within the bounds of the serviceable.

ASTP—General

The primary and most "official" source of information on the results of the ASTP work was embodied in the report of a special investigating committee (156). The second printing of this report included recommendations for the application to both high school and college of this type of language work. That this report was not the last word on the subject, as far as investigation is concerned, was shown by Dunkel's (65) outline of the Investigation of the Teaching of a Second Language. General treatments of the question as a whole were presented by a long list of writers from which the following were selected as giving the most complete and informative picture of the situation: Agard (1), Brann (20), Brown (22), Hohlfeld (104), Johnson (112), Langellier (138), Levy (141), Miller (152), Milligan (154), Munro (163), Pargment (176), F. M. Rogers (207, 208), P. P. Rogers (209), Scanio (214), Springer (224), Wahlgren (241), Waxman (244), and Wilmers (250). Points made by these writers more or less in common involved, first of all, stress on the spoken language for use in everyday life. Matters of pronunciation, vocabulary, functional grammar and so forth were treated in many of them as a matter of course. All recognized that increased time, selection of students, motivation, small classes, increased physical facilities were factors contributing to the success of the program. Many pointed out that, while reading was not one of the specific objectives of the ASTP course, this ability was apparently well acquired especially with a minimum of extra effort. It may well be that this—when and if established by testing—will become one of the main ultimate contributions of the program to modern language teaching.

Opinion on the eventual outcomes was not unanimous, however. Herman (100), for example, felt that the report of the special committee was not

sufficiently based on solid criteria to warrant blind acceptance. Others, including some mentioned above, urged the greatest of caution in trying to adapt the intensive type of course to civilian work at any level, especially in the high school. While recognizing that the program did do some excellent work, several writers preferred to withhold judgment pending further data. These included E. Cross (42), S. H. Cross (43), Morgan (161, 162), Paulsen (182), and Stroebe (228).

Hyneman (109) described the evolution of the whole army language program from its inception thru the establishment of the ASTP program. He had been connected with the development from the start and portrayed the development as seen from the "inside." Friedl (78) gave an exhaustive description of the way in which a typical course was conducted and provided a wealth of sample units to illustrate procedures.

ASTP—"Linguistic Analysis"

An offshoot of the general problems raised by the ASTP was the question of method. As originally set up for the less common languages, the approach known as "linguistic analysis" was used. This was the method which first brought the linguist-informant team together. Upon the inception of the ASTP, the directives indicated application of this method to the more common languages, and discussion immediately arose as to its validity. In actual practice, the method underwent many variations which can be seen from the reports of individual programs. The discussion of the pros and cons of the application of this approach in its pure form had many implications, and certain elements, such as the use of the informant, were adapted to more traditional approaches.

A bare minimum of treatments on both sides has been selected for presentation here. Sturtevant (231) offered an answer to the question, "What is a linguist?" giving a specialized definition of the term in line with the conception of "linguistic analysis." Haas (93) presented a picture of the "linguist" as a teacher of languages, but in connection with less common ones. Nicholson (169) spoke from the learner's point of view in describing the working of the linguist-informant method in the study of Malay. The application of this method to the languages of Europe was defended by Hall (95) and attacked by Pei (184). (These are but the most extensive treatments of the question by these two writers. The full list can be found in the bibliographies already mentioned.) Carmody (27, 28) also objected vigorously to the use of the system in teaching French.

Two items in non-professional publications caused some flurry of discussion. A digest of an article by Walker (242) allowed the general public to draw inferences which brought violent objections from language teachers. Doyle (61) and Withers (252) pointed out that the time spent in learning languages should be judged by the clock rather than by the calendar, and that the seemingly short nine-month course was in reality equal to a six-year course on the basis of the usual manner of presentation. An

exposé of the linguist-informant method as applied to uncommon languages appeared in *Fortune* (75) and gave rise to similar misunderstandings. An answer was carried in the same publication several issues later (75).

Hall (96), basing his argument on the stress on speech rather than on writing, suggested reoriented and revised textbooks. He illustrated this point in connection with French grammar (94) in a way which seemed open to contrary argument.

ASTP—Others

The balance of the items of this section on the ASTP treats a variety of more or less special topics. The language program of the Navy was described at some length by Axelrod (7), while Vaeth (238) told of efforts at language teaching by the Navy in Latin America. Rowe (212) gave the student's point of view from his experience in one of the Spanish ASTP programs. The informant's point of view was expounded by Schmertzing (216), Sebeok (218), and Teller (232). "Intensive" language courses at Yale and Wisconsin were described by Buendia (24) and Harris (98). The function of "area" work in the total program was discussed and evaluated by Gibson (84) and Voegelin (240). Schaeffer (215) treated the surrender value of ASTP work for the trainee. He took the position that the work would afford the student an excellent background for future work.

Several descriptions of work in individual languages appeared. Corbato (38) treated the teaching of Chinese, Myron (165) of French, Zech (255) of German, Ceroni (30) of Italian. O. H. Moore (160) gave an interesting sidelight in the description of the psychological effect of the program on a group of Italo-American men studying Italian in the ASTP. The question of psychological adjustment among these men was nearly as important, apparently, as the linguistic phase.

Conclusion

All in all, the period covered here was one of great activity as well as one of transition. The tendency to change from a pure reading aim to a conversational aim was most marked, brought especially to the fore by the ASTP. What the final outcome will be, cannot, of course, be predicted with certainty, but if indicated trends continue, it is probable that the "four-fold" aim of hearing, speaking, reading, writing will regain the place it once occupied with great, but not exclusive, stress on the availability of languages for use in practical situations.

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CHAPTER V

School Instruction in Art

THOMAS MUNRO with the assistance of RAY N. FAULKNER,
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THE PERIOD covered by this report contains the last three years of World War II. The last report in this REVIEW, dealing with the visual arts, was that of Arisman (5) which covered the opening years of the war. The last peacetime report and the last to deal with fairly normal conditions, was that of Faulkner and Myers (43). The present report covers the period in which teaching and research in the visual arts were most seriously restricted by war conditions: (a) in the curtailment of personnel for research and teaching, many of those formerly active being in armed service or other war work; and (b) in the curtailment of funds, from foundation and other sources, to support special inquiries and educational projects. Those art teachers who remained at their posts were, in many cases, too heavily overworked with added teaching and committee work to welcome tasks which did not seem to bear directly on either regular or wartime duties.

Art Instruction During the War Years

During the past three years, one finds no single book on art education comparable in scope and collective enterprise with the 1941 yearbook of the National Society for the Study of Education (118). One finds little important experimental research in art education, except a few belated reports on projects begun before the war. Many articles discussed art education in a general, informal way. Some protested against the tendency of wars and depressions to interfere with art education, reaffirmed the cultural value of such study, and found a new need for it in times of emotional stress, destruction, and tragedy. As usual, many short articles by art teachers described particular projects carried on in schools, but little novelty was claimed for most of them.

Three areas, within or closely connected with art education, showed increasing activity under adverse conditions, with fresh approaches to new and perennial problems. One was directly affected by the war: it concerned the question, "What can the artist and art teacher do which will have immediate, practical value in the war effort?" Another was stimulated by the wartime interest in our Latin American and Asiatic alliances: it had to do with the place of art in intercultural cooperation. A third seemed to have no special connection with the war situation; it was the field of aesthetics, including scientific as well as philosophical studies of the arts, especially from a psychological point of view.

On the first of these subjects, art in wartime, art teachers showed their eagerness to adapt their skills in ways which might be of military value, and their ingenuity in thinking out ways of doing so. Camouflage, the

first thought of many artists facing the problem, proved to be an outlet for fewer of them than had at first been expected; but many other ways opened. One of the first answers to the problem was that of Fox (50), who pointed out many different wartime needs for the artist, including industrial design and production illustration, exhibitions, posters, documentary sketches, maps, models, and cartoons. Several organized groups and committees dealt with the problem in detail, especially the Fine Arts Staff of Teachers College (46). In its booklet Fox (49) discussed a special phase, the function of art museums in the crisis. Bennett (16) and others in a committee of college art teachers reviewed the practical possibilities under several headings: military, civilian and industrial, cultural, historic and interpretive, creative painting and sculpture, architecture, drama, motion pictures, and museums. They asked that too much of immediate practical value should not be expected, and that the value of the arts in sustaining the human spirit in the presence of tragedy should not be forgotten. Macgowan (92), Miller (100), and others of the NEA Department of Art Education emphasized the problem of objectives for art education in wartime, and reached a similar conclusion, as did Winslow (169) and Bradley (19). Recognizing the need of transferring energy to practical uses, they asked that the machinery for peacetime art education be not allowed to break down entirely, and that the far-reaching value of art for social morale be fully utilized.

Research in Art Education

The literature reviewed below covers the major contributions to art teaching made thru research in art education, psychology, and aesthetics. Because an understanding of the fundamental characteristics of the processes of *creation* and *appreciation*—as related to the production and enjoyment of art as well as to personality development—is essential to the improvement of art instruction, special emphasis has been given the literature in these areas. The remainder of this chapter is organized under the following headings: The Scarcity of Exact Research and Controlled Experiment in Art Education; Psychological Studies of Children's Art and Behavior Toward Art; The Psychology of Visual Art; The Visual Arts in General Education at Various Levels; College Art Instruction; and The Growth of Aesthetics as a Descriptive Science.

The Scarcity of Exact Research and Controlled Experiment in Art Education

Research and experiment of strictly scientific standards have always been rare in American art education, and they declined to the vanishing point during the late war years. It is a primary task for scientific aesthetics and the psychology of art to work out appropriate methodology about which much can be learned from German and Austrian work between the two world wars. American art teachers are usually not adequately trained

to do exact research and school conditions often forbid expending the necessary time and energy. No publications during this period attack in a thoro, scientific way the central problem of the value of one basic method of art education compared with another.

Foundation work, however, is being done in applying the results of general psychology and psychoanalysis to illuminate the processes involved in art education. Read's study (139), the most substantial effort of this sort, analyzed many pictures by English children from various psychological points of view, especially that of Jung, and showed the psychological implications of a "natural" mode of art education. Meier's discussion of talent in children (96) summarized some of his earlier studies in this field. Lark-Horovitz (82) compared evaluative and other critical judgments of children's art by teachers and other experts, showing great variation among them in the understanding of terms as well as in the judgments expressed. She urged more objective methods of analysis.

The terms "research" and "experiment" are often used loosely by teachers in describing methods and projects which they undertake. Control, measurement, and other requisites are often totally lacking, but something is gained by a careful report of experience, even if informal and subjective. When performed by persons of scientific background, results are significant, as in the case study by Schaefer-Simmern and Sarason (144) of creative artistic therapy applied to a thirty-year-old feeble-minded woman. They concluded that intelligence tests did not adequately measure the creative aspect of intelligence and showed the improvement in general personality adjustment resulting from "procedures based on the individual's potentialities for organized development." The need for detailed experimental investigation was revealed in a suggestive study by Webb (166) of the effects of art in preventing delinquency. Harms (59) and Brick (20) concluded that children's art was a useful diagnostic and therapeutic aid in psychopathology.

Perry (129) reported an experiment with a diversified art program, giving specific details of materials and procedures and a general impression of beneficial results. Meier (95) advocated scientific rather than emotional means in teaching color and described one apparatus for presenting pairs of spectral colors in patches of variable size and another providing variable illumination of objects and settings. Jones (74) described another instrument for studying color, light, composition, and design, using colored lights instead of pigment. Barnes (9) described a method for testing understanding of the visual arts, as part of a course unit on painting, involving judging contrasts or similarities between lantern slides in terms of color, expression, composition, and function. Sherman (153) reported gains by an experimental group, much in excess of gains by a control group, in peripheral acuity, central stereo-acuity, and peripheral stereo-acuity resulting from an experimental project in elementary drawing and painting.

Morsch and Abbott (106) studied the after-image behavior of seven

hundred children, and found no indication of a special eidetic ability, rather a graded continuum of sharpness and clarity of the visual after-image. There was a relation between ability to experience after-images and age as well as with art achievement; there was no particular sex difference and only slight positive relationship with intelligence.

Psychological Studies of Children's Art Products and Behavior toward Art

Tho usually throwing no direct light on the choice of educational methods, studies of children's art products and behavior in art situations contribute much indirectly. They show the teacher more clearly what factors he has to deal with in the student's personality and the significance of certain attitudes and types of product. Thus he can work out his own methods more intelligently. There is great practical need for methods of *evaluation*, both of aptitude and of achievement; also for *descriptive* studies of developmental stages, personality types, and other phenomena, as revealed in children's art.

Faulkner (44) surveyed and criticized previous discussions of evaluation in art, pointing out difficulties in many proposed tests and measures, and showing how some of them could be used in limited ways. Mellone (98) made a factorial study of picture tests for young children. Seashore's memoirs of his scientific work described the origin of the Iowa studies in psychology of art (152). Hunter (71) urged an attempt to appreciate and measure the inner accomplishments of students. Beckham (13) reported results of administering the Lewerenz tests in fundamental abilities in visual art to 100 intellectually superior Negro school children, 100 art pupils, and 100 randomly selected pupils. His results indicated that intelligence is an important factor in many of the art test items and that a few showed significant age differences.

Aimed at objective description of developmental stages rather than at evaluation, the Cleveland Museum of Art studies of children's art ability were reported by Munro, Lark-Horovitz, and Barnhart (109) and discussed by Arisman (5). They showed intermediate stages in the prevailing tendency toward realism of representation and proposed tentative age-level norms in this and other respects, which could be used in estimating the child's status as advanced, average, or retarded. Beach and Bressler (12) distinguished five developmental phases in the painting of children between ages two and seven. These are: relatively uncoordinated scrubbing; accidentally attained design; consciously sought design; representation without perspective; and finally full realization of representation and design. Teachers should understand the developmental pattern, encouraging the child to find satisfaction in each phase rather than try to rush him toward a later one. Barnhart (10) reported on the use of a device, the "recorder," for observing the stages by which a child constructs a pictorial composition, and showed how children differ in this regard. Cain (22)

described an objective measure of accuracy in drawings, as shown in ability to copy irregular hexagons from memory. Schmidl-Waehner (147) reported on the application of certain formal criteria for the analysis of children's drawings: size of picture, proportion and shape of paper chosen, distribution of form-elements in the picture, preference of expression thru line or spots, and motion-elements. She found that analysis based on such criteria affords insight into the dynamic processes of the child, supplementing Rorschach tests. Hurlock (72) described spontaneous drawings by adolescents on book covers, scraps of paper, and the like.

Triplett (162) analyzed the educational needs of contemporary artists, arguing that much activity carried on today under the name of art fails to satisfy such needs and blinds adolescent students to true values. Simpson (155) analyzed "creativity" as applied to children's art, stating that it fell within the province of the psychology of learning. Three basic principles of learning were listed: readiness, in the form of motivation or purpose, implying an aim; activity of the learner; and evaluation of the approximation of reaching one's aim. Creative production was said to imply something that is purposive, knowledge previously gained and ability to concentrate sufficiently, and evaluation. Imitation is not rejected as a means of learning, because it saves energy by not repeating previously established knowledge; creativity should not mean mere variation from a standard. The beginnings of drawing are simply trial and error, and are not creative in the sense that they are mysterious or unique. Evaluation should be in terms of the purpose aimed at, keeping in view the technical limitations of the child. The tendency of children to simplify difficult designs in reproducing them was described by Hildreth (62); the child reworks concepts to fit his experience and ability.

On the side of *appreciation or response* to art, Katz (76) proposed a test for estimating the nature of and changes in elementary-school children's preferences for traditional and modern paintings. Two years later he reported on an extensive factual study of children's preferences for traditional and modern paintings (77), finding that among schools the higher the socio-economic level, and among individuals the higher the IQ, the greater was the preference for traditional paintings. Preference for the traditional increased from Grades II-VI. Todd (161) also studied such preferences, finding that many children between ten and twelve years of age could distinguish correctly between older and modern paintings and, analyzing their judgments according to criteria used, subjectmatter, age, and sex differences, stated reasons for preference. Huang (68) compared kindergarten children's responsiveness to form and color. Luchins (90) showed how children's perception of complex drawings was influenced by remarks or previously shown sketches.

A little further from the central problems of art education are those studies dealing with children's art or behavior toward art, less for their aesthetic importance than as clues to personality traits or as data of general

psychological significance. Such studies, however, may all contribute to an understanding of the child's expressions and responses thru indicating various causal factors other than specific art instruction or experience. Naumburg contributed four studies of children's art expression (120, 121, 122 and 123). The first, dealing with effects of the war, concluded that as boys gain confidence in themselves stereotyped drawing diminishes; war is dealt with realistically, its conflicts being used to express hostility and regression. The second studied the art expression of a behavior problem boy as an aid in diagnosis and therapy, stressing the importance of the unconscious and the role of fantasy expression thru free art work. The third argued that realistic and symbolic art forms help to release tensions; free art expression is a means of therapy. The fourth showed significant characteristics in the drawings of a hysterical adolescent girl. War themes in children's drawings were studied by Hildreth (63) who found a great increase in such themes in 1943 over 1942 and greater tendency toward them among boys than among girls.

The value of art activities for revealing personality traits as well as for guiding them was urged by Indrikson (73). In England's (40) study of children's drawings, it appeared that problem children, children from broken homes, and delinquents have greater productivity; i.e., express themselves to a greater degree than the presumably normal public-school child, the retarded and the feeble-minded child. There was no significant difference between the groups in percents of unpleasant experiences represented. Alschuler and Hattwick (2) examined easel painting as an index of personality in preschool children, to discover (a) if and how the free activities of two-, three-, and four-year-old children with certain creative media (easel paints, crayons, blocks, dramatic play) may be related to, and give insight into, individual personalities; (b) what generalized tendencies, if any, might be found expressed in these activities. They concluded that during this self-expressive phase children behave as they feel; however, there are many exceptions in which feelings not overtly expressed are expressed in easel painting.

Animal drawings were found significant by Bender and Rapoport (14), as facilitating displacement of repressed drives; nonaggressive-looking animals being associated with mild behavior, and aggressive-looking animals with psychoneurotic behavior. Bender and Wolfson (15) interpreted the nautical theme in the art and fantasy of children, while Wolff (174) outlined projective methods for personality analysis of expressive behavior in preschool children. Schilder and Levins (144) showed how abstract art might express human problems. Symonds and Krugman (158) discussed finger painting and drawing tests as means for studying personality. Mc Intosh and Pickford (93) showed how the drawings of an eight-year-old girl revealed her problems of hatred of a younger sister and parents, and envy of an older brother. The drawings showed artistic merit whenever there was either a strong conflict unconsciously expressed or

when conflicts were shown successfully resolved. When the pictures were ineffective fantasies or wish-fulfilments, they were relatively inartistic. This interpretation of artistic motivation was applied to the music of Tschaikovsky, Brahms, Bach, and Beethoven. Brick (20) reported on observations of children's changes of mood and attitude in relation to their paintings. Elkisch (39) analyzed the art products of eight children, selected on the basis of sociometric ratings. In some of the low-scoring children, maladjustment was shown in the drawings: rule (rigidity as well as inertness), simplicity, compression, disintegration, lack of realism, or prevalence of symbolism. In those of some whose sociometric scores were high, adjustive ability was shown in prevalence of rhythm over rule, complexity over simplicity, expansion over compression; integration dominated, and there was a healthy attitude toward realism.

Possible racial and cultural differences were explored by Taylor (159) and by Russel (142). The former, in experimenting with drawings by students in college in India, concluded that cultural influences affect drawings; there were differences not only between the American and the Indian student but between the various Indian cultural groups. The latter gave the Goodenough Draw-a-Man test to Zuni children, finding that in order to discover developmental trends in behavior, it is often necessary to remove cultural and experiential influences by some such procedure as in the instructed drawings. Dennis (37) gave the same test to Hopi children, finding an increase in sociodifferentiation with increasing age. Löwenfeld (88) showed how American Negroes (adults and children) take socially approved art as their model.

The Psychology of Visual Art

Numerous articles and a few books dealt with this important approach to art education without restriction to children, altho many of their findings applied to persons of all ages. An introductory textbook on the psychology of art by Meier (94) summarized many researches, including some of his own on creative production and talent in children; but it surveyed the wider subject of art in contemporary affairs and modern experimental art. Portnoy (134) covered a wide field of psychological material as found in works of art and in artists' lives and comments. The creative process, as revealed by statements of artists, was also emphasized by Rees (140), who analyzed it in terms of four Gestalt principles: integration; adjustment; purposive differentiation; and *Prägnanz*.

Briefer but far-reaching analyses of aesthetic experience, the psychology of the artist, and the psychology of drawing and painting were given by Schoen (150, 148), Bordin (18), and Cain (23). Löwenfeld (87) analyzed creative activity as a means of self-expression and self-adjustment. Self-expression is not merely the expression of thoughts and ideas in general terms of contents; it is the reflection of developmental stages within an individual, a dynamic manifestation of the mental and emotional state

of the individual, and changes as the individual develops. If the individual has lost the path of self-expression, thinking in terms of others and expressing himself with strange means, he has blocked his road of development. Löwenfeld also (89) outlined a series of tests for visual and haptic attitudes. Whittaker, Hutchison, and Pickford (167) reported on a questionnaire given to painters and musicians. Inspiration presents itself to musicians in musical terms who are inspired by the feel of sounds of instruments or voices; painters are inspired in pictorial terms, by some object or by their medium. The artists are greatly influenced by their social environment, the traditional folk art, and the interests of their community.

Several studies dealt with more specific problems related to the psychology of visual art. Koehler and Wallach (80) observed figural after-effects, finding that objects in visual space are represented by corresponding figure processes in the visual cortex. Arnheim (6) discussed Gestalt and art, showing how the artist organizes sensory facts according to the laws of Prägnanz, unity, segregation, and balance. Eysenck (42) applied a Gestalt concept to the problem of aesthetic pleasure. Peters (130) studied preference judgments of pictures, finding that a shift in affective value following learning which involved positive and negative responses is correlated with a perceptual, not a conceptual, observing set.

A number of publications, mostly brief, dealt with phenomena of art and personality from a psychoanalytic or psychiatric point of view. Sachs (143) covered a variety of aesthetic topics in terms of the "creative unconscious." Kris (81) suggested that in creating art the artist's ego control is reduced, and that a temporary regression takes place which is used by the ego for its own purposes. Unconscious determination of creation in painting and sculpture is suggested and illustrated in the work of three artists. An experimental study of drawing behavior of adult psychotics was reported by Anastasi and Foley (4), who found little difference between psychotic and normal in some respects. In another study (3), these authors analyzed patients' drawings as to medium, subject, technic, and the like. Brown and Goitein (21) described an investigation of the drawings by normal subjects of their own bodies, made while blindfolded. The authors believe that if a drawing by a normal subject matches well that of a particular abnormal group, the normal subject's personality will show trends similar to those found in the particular psychiatric group.

Wight (168) made a detailed study of the art of Picasso from a psychoanalytic standpoint, interpreting that painter's successive styles and their common characteristics, with hypotheses regarding their unconscious motivation. Christensen (25) made a similar interpretation of Andrea del Sarto. Stainbrook and Löwenbach (156) had patients write their names and draw simple figures after electroshock treatment; resulting changes are described. Prados (137) reported on results of Rorschach tests administered to professional painters of various artistic schools. Significant common elements were: superior mentality emphasizing abstract, logical,

and constructive thinking; fear of mediocrity; strong drive for achievement; richness of inner interests and stimuli for spontaneous creative thought; strong sensitiveness and emotional responsiveness to the outer world, combined with refined intellectual control.

The Visual Arts in General Education on Various Levels

In the minds of many teachers, the pressure of war and depression away from cultural values and toward the narrowly practical seemed to call for a reaffirmation of faith in these values. There was renewed emphasis on the fact that art is not merely a technic or vocation, but a possible way of living and of personality development for all.

Macgowan (91) wrote a concise summary of the aims and processes of art education, stressing the value of appreciation for the layman and creativeness for the artist and called for a program of experimental research. Shoemaker (154) assembled and applied the views of many contemporary philosophers and aestheticians on the humanities, especially literature, and their place in education. Mursell (115, 116) discussed the arts as a phase of general education and stated that art is a means by which emotional values and meanings are made explicit, objective, public, communicable. Munro (114) stated three objectives for art education: selecting and transmitting an important part of the world's cultural heritage; developing successful professional artists, able to make a living; and developing some who can make original contributions to art. Read (138) and Moholy-Nagy (101) called for a new type of art education for free men and for the reintegration of art into daily life. Howell (67) foresaw the following postwar trends: development of the appreciation of beauty; training powers of observation and visual judgment; development of free creative expression; realization of the unity of all arts; evaluating art in terms of life objectives. Niblett (124) stressed the need of educating feeling and desire along with power to think and analyze. By means of art Bickel (17) also emphasized personality development and social adjustment thru art and commented on the art museum as an advantageous place to achieve them. Schoen (149) edited a symposium on the enjoyment of the arts, with an introduction on the realm of art and the requisites for enjoyment. Munro (110) analyzed the various types of aim and value in painting and the psychological question of liking and enjoyment. Fox (48) analyzed the movies as a great new art-form, with a tremendous range of possible effects, and compared them with other arts as to their social and psychological effects on American life (47).

In spite of the confidence of art educators that art and aesthetic training have a valuable part to play in general education, the forty-first year-book of the National Society for the Study of Education, devoted to *Philosophies of Education* (119) made almost no mention of them. The Harvard report (61) on objectives of general education gave more recognition to

the arts and other humanities, and so did Baxter (11) in reporting for a commission of American colleges on the aims of liberal education.

Faulkner and Davis (45), in appraising summer workshop art programs as part of teacher-education in general, pointed out the long trend toward emphasis on creative self-expression. Little progress has been made, except on lower age-levels, toward utilizing the values of art for growth of personality. They recommend that teachers in service should have workshops available for participation in art. Hoffman and Hoffman (65) reported on the Ladies Garment Workers Union art workshops.

The most thoro and extensive textbook on art education was that of D'Amico (32) who undertook to combine advantages of the academic and progressive schools—discipline and skill, and creative self-expression. He discussed a wide range of visual arts, and described technical devices in line with aims and principles. Winslow (170, 171, 173) approached the subject more from the standpoint of public-school administration and classroom conditions, outlining plans for physical equipment and curriculum organization.

The final report on the Owatonna Art Education Project by Ziegfeld and Smith (176) describes in detail the experimental development of a functional art program for a typical American community. Promoted by the University of Minnesota and the Public Schools of Owatonna and aided by the Carnegie Foundation for the Advancement of Teaching and the Carnegie Corporation, this project included a five-year study of the art needs and interests of the children and adults of Owatonna. The report covers such topics as art in the daily life of the community, methods of developing the art program in the schools, a point of view in art education, and the art program as it functioned in the school system. Five additional reports (126) present specific accounts of art units for the elementary- and secondary-school levels. These publications are a landmark in the trend toward realistic art programs for the public schools. A retrospect of this notable project was given by Tyler (163).

New Methods for Teaching Art

Several briefer studies proposed specific new methods and devices in the teaching of visual art. Guilford (58) and Stites (157) described the use of films in teaching art history and appreciation. Howell (66) reported on Cleveland experiments in teaching art appreciation by radio, while Grier (57) discussed television as a new means of art education. Cook (29) outlined a kinesthetic approach in teaching sculpture to the blind, and a short book by Harris and Piccoli (60) explained a "creative" approach to technics in sculpture. Jones (74) described an instrument for analyzing composition and design, consisting of colored lights to show contrast, mixture, and the like.

Museums received considerable attention as one of the newer agencies for teaching art, especially appreciation and history, with some scope for

technical training also. In Powel's report (136) on a five-year experiment of the General Education Board on museum work with secondary schools, the new trend toward "bringing the art museum to the school" was described in detail. Aims and specific methods were discussed for circulating exhibits in schools and for exhibits in museums especially adapted to adolescents. Defenbacher (35) described a new exhibition technic for schools and art museums. Low (85) challenged old conceptions of the museum, and urged that it be managed as a social instrument. The growth of museum educational work was summarized by Everard (41). D'Amico (33) reported on the educational program of the Museum of Modern Art and the new educational quarters of the Philadelphia Museum were described by Kimball and Benson (78). Van Loozen and Bulkley (164) reported on museum and high-school cooperation in teaching American primitive art.

The perennial problem of integrating and correlating the arts received some attention, altho few radically new approaches were recorded. Poole and Klinefelter (133) described a specific project of cooperation between the Walters Art Gallery and the Baltimore Orchestra, studying the relation of art to music in cultural history. Peck and others (127), Cooney (31), Merrick and others (99) reported on experiments in correlating the arts, while Winslow (172) discussed the integrated program from the school administrator's standpoint.

College Art Instruction

On the college level, there was searching criticism of present aims and methods, as well as a demand for more attention to art in the curriculum. There was more sympathy toward it on the part of curriculum builders than heretofore, but literature remained the chief "cultural" or "humanistic" element in general education. The need for instruction in the visual arts for all college students was not generally recognized. Increasing emphasis was placed on appreciation and understanding of the role of art in social culture. Minute historical scholarship, names, dates, and facts for their own sake had been overemphasized in college art courses, yet many championed the chronological approach as the most satisfactory. Many felt that all college students should have a chance at studio work in the arts, if possible correlated with history and appreciation. There was difference of opinion on how valuable a general college education, or even art history and theory, was for the prospective artist. There was comparatively little discussion of how the professional art student could best be given the technical and other requirements of his craft.

Goldwater (55) prepared a comprehensive survey of art teaching in American colleges, pointing out the various types of introductory, history, and studio courses given; the early classical emphasis; and the usual lack of balance between theory and practice, painting and other arts. Elsewhere (54) Goldwater discussed the place of modern art in the college

curriculum. A statement by Meiss (27) and a committee of the College Art Association discussed the place of art history in the liberal arts curriculum. They reaffirmed the value of art for emotional and imaginative development and for the expression of human thoughts about man's relation with the world. They recommended that art history should not consist merely of names, dates, and classifications, or for the training of art teachers or artists; instead, it should aim to promote enjoyment, insight, and judgment. Morey (103) pointed out the temperamental incompatibility between a critical art historian and a practicing artist and the difficulty of training an art historian properly within usual limits of graduate study. Blind spots in art history teaching were diagnosed by Low (86), and art history as a college subject was defended by Coolidge (30). Baldinger (8), Morse (105), Rusk (141), Washburn (165), Schmeckebier (146), and Hilpert (64) discussed the place of art in a liberal education. Ogden (125) reported that art teachers must be broadly equipped, well grounded in theory and practice, general and special subjectmatter.

Munro (108) stressed the possible values of aesthetics in college studies of the arts. Aesthetics should undertake to select the most important artistic elements in the world's cultural heritage, for transmission to youth. It should help to organize these in systematic ways—theoretical, historical, and practical—not fearing broad generalization, opposing overspecialization, and bringing students into firsthand contact with modern as well as ancient art. Discussing how art should be taught in the liberal arts college, Young (175) endorsed these views and defended an integrative, theoretical approach. In discussing art as a core for democratic education, Gayne (51) proposed that the art teacher help coordinate various fields of art and not be a technical specialist.

Among those who urged the value of college education for prospective artists was Longman (84), who added that the profession of an artist meets all required conditions for creative scholarship and should be directly planned for in colleges. A committee of the College Art Association under Mangravite (28) discussed courses in the practice of art and recommended that a comprehensive "thinking-doing" art curriculum be planned on all levels of education. Practice of art should be considered necessary for full understanding. In a series of four articles, Washburn (165) stated the case for creative arts in higher education: understanding and practice of the creative process are essential to full appreciation; colleges should have creative artists at work on the campus, provide for the talented art student, and give understanding to all; artists should be able to teach, and the time should be provided the artist for personal painting; traveling, contemporary shows should be provided. Danes (34) criticized the education of artists as leaving them ignorant of the materials with which they work.

There were signs of a trend in requirements for the Ph.D. and Ed.D.

degrees, contrasting with the traditional "scholarly research" thesis toward allowing credit for research and theses of the following types: a studio problem, as in producing a painting; solving a practical problem in a teaching situation; selecting and reorganizing art content (theory, history, aesthetics) for use in teaching others or adding to the literature of the subject; statement of an art philosophy and educational procedure for teaching some branch of art. Seashore (151) reported the vote by deans of graduate schools of the Association of American Universities on broadening thesis requirements to include creative, imaginative work on a par with traditional research; theses can take any form that can be evaluated as evidence of creative scholarship or exhibition of artistic skill. A thesis by Kinzinger (79) referred to a series of three oil paintings; one by Dietrich (38) dealt with use of design materials in teaching. Del Dosso (36) presented as a thesis a plan for providing art experiences for the schools of New Mexico, and Moreno (102) worked out an art curriculum for the Puerto Rico schools.

The Growth of Aesthetics as a Descriptive Science

Even under difficult war conditions, there was a marked upturn of interest and activity in aesthetics. Concretely, this involved the formation of the first national professional association in the field—the American Society for Aesthetics—and the publication of a quarterly magazine—the *Journal of Aesthetics and Art Criticism*. Thru such means teachers, writers, and artists in many arts were encouraged to collaborate more systematically on common problems. Various philosophical and scientific approaches, especially those of psychology, cultural history, and the social sciences, were considered in relation to the problems of aesthetics.

Conferences discussing the future of aesthetics were reported by Munro (112) and reviewed by Alford (1). Munro (113) outlined the advantages of organized cooperation thru a professional society, thru encouraging continuous research along various lines, and called for new American approaches based on European achievements. He showed how aesthetics could function educationally as a selective and integrative factor in the assimilation of world culture (108), distinguished the main approaches in contemporary aesthetics (107), and outlined a method for analyzing form in any art (111). Gilbert (52) analyzed recent trends in aesthetics which have supplanted Croce's influence: semantics, psychological study of sublimated dreams, and exploration of the meaning of symbols.

Psychological approaches to aesthetics were especially active. Hungerland (70) discussed the problem of descriptive analysis of style in the visual arts from the standpoint of Gestalt psychology. He suggested that different sets of expectations are applicable to and strongly influence the perception of different kinds of art, and that these sets are determined largely by familiarity with the different styles. Gotshalk (56) discussed the problem of educating aesthetic taste. Boas and others in a symposium

(26) discussed the relation of art to culture in anthropological and philosophical terms. Schoen (148) summarized current psychological thought on the nature of aesthetic experience, especially regarding the relation of the aesthetic to the practical, and the detail to the whole. The aesthetic process was more fully analyzed by Morris (104), who found it to be a process of arousal and fulfilment of anticipation thru the progressive contemplation of the object. Since the aesthetic experience is essentially relational, the author objected to atomistic analyses; aesthetic purpose and meaning were explained in terms of an expectation which is set up and satisfied in the internal relationships of the aesthetic object.

There were many more specific studies, of which the following are typical. Pickford (132) analyzed the effect of social factors upon the style of painting of individualistic painters, such as Cézanne; groups of painters, such as the Barbizon school; and traditional schools, such as the Mogul and Russian painters. Individual tendencies and family influences were compared with effects resulting from the influence of particular leaders, general social changes, other cultures, contacts, and interactions. The term "artistic intent," as used in art history, was analyzed by Hungerland (69). Peel (128) reported on an investigation of preferences involving the use of artistic types as criteria; it provided a basis of analysis for calculating the estimate of liking in terms of the artistic qualities of the items and for analyzing the correlations into factors characterizing the group of persons and criteria. Peters also (131) made an experimental study of aesthetic judgment, considering it under three aspects: attitudes, or the response aspect of pleasantness or unpleasantness; perception, or the stimulus aspect of aesthetic experience; and experience, or the genetic aspect of affection. Powel, Thorndike, and Woodyard (135) studied the aesthetic life of communities by visiting seven cities and giving them aesthetic ratings. The items assessed included homes, schools, churches, front yards, and shop windows. Zucker (177) discussed the use of space in architecture, sculpture, and city planning.

The Place of Art in Intercultural Cooperation

The increasing interest of American education in understanding foreign cultures, including their aesthetic aspects, was further stimulated by the war, with its global involvement and resultant hopes of eventual world understanding. In sessions of various educational groups, many speakers called for more intercultural study in the schools. Melchior (97) explained the place of art in the U. S. Government's Inter-American demonstration center project. Cherrington (24) discussed the values of intercultural education from the standpoint of the State Department's cultural relations program, and Tchou (160) outlined the teacher's part in developing world citizens. Glace and others (53) discussed world understanding fostered by art education and cultural contributions of the arts to national and international understanding. Scientific bases for a new approach to

the analysis of culture and personality were laid by Kardiner (75) and Linton (83), who combined psychoanalytic methods and hypotheses with those of ethnology in extensive field investigations of various cultures.

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CHAPTER VI

School Instruction in Music

PAUL R. FARNSWORTH

THE WAR has quite naturally caused a cut-back in the amount of scholarly work done in the field of music during the period under review. There are signs, however, of a renewed interest both in research and in publication. *The Journal of Musicology* has reappeared after having skipped a number of its publication dates but is not yet back on its regular publication schedule. The papers read at the 1939 meetings of the International Congress of Musicology have finally been published (29) after a delay of almost five years. And the editorial board of *The Journal of Aesthetics and Art Criticism* has been revamped. Its new policy will be to encourage the publication of articles of a research nature as well as those which are more philosophical in character.

General Sources

The Music Teachers National Association has continued thru 1943 its excellent policy of publishing among its yearly *Proceedings* brief bibliographies of the experimental studies on the psychology of music (48, 49). In its 1944 publication a still briefer list was included in a bibliography on "Literature about Music" (57). Robinson (47) has collected the American war songs commonly heard among the men in World War II and has found that they can be placed in a rather small number of categories on the basis of what they are about: food, pests, the terrors of war, the enemy, sex, and sentiment expressed for loved ones or for home. Schoen (50) has written an interesting little book whose concern is with the philosophy of music as it relates to psychology and education. And altho the publication of Mursell's *Music in American Schools* (37) was noted in the April 1943 issue of the *Review of Educational Research* (35), its importance is such that it should again be called to the attention of the music educator, particularly since its publication date falls within the period now being considered.

Creativity

Several articles have appeared in what is perhaps the most difficult field of research in all musicology, that of creativity. Doig (10, 11) has continued her observations on the musical creations of children six to sixteen years of age. Among the tendencies disclosed were strong preferences for scalewise melodies and for major keys. Observers at the Pillsbury Foundation (33, 34) have published two more short monographs. These give illustrations of the spontaneous creations of preschool children and prove that the reading and writing of music can be taught to the very young. What stimulates the musician to create has been considered by three British

investigators (59). Unfortunately, nothing beyond what any intelligent layman might suggest was disclosed by this questionnaire study.

Formal Test Data

Antrim (2) has mentioned the fact that high-school students of music often have higher IQ's than do students who are not studying music. This phenomenon has led him to believe that the study of music makes for better concentration. While this theory may very well be valid, the possibility must not be overlooked that there may exist selective forces which encourage the brighter students to study music. Gilbert (16) has studied the sex differences disclosed in giving the Kwalwasser-Dykema tests to 1000 college students. These differences, which favored the girls, appeared only among the musically trained subjects. And as the trained girls had had more formal instruction than had the trained boys, it would seem likely that the score superiority was a function mainly, if not wholly, of musical training.

Beckham (4) has found that the Kwalwasser-Dykema battery and music teachers agree reasonably well in picking out musical children. His teachers' choices tended to be far more musical than were those chosen on the basis of either IQ or chronological age. Dunlevy (12) has verified an earlier finding that scores on the older Seashore battery correlate appreciably with amount of musical training, and has found that her highest scoring subjects showed the greatest preference for "classical" music. Woods and Martin (64) gave the Kwalwasser-Dykema test battery to 578 pupils in the sixth grades of Cabell County, West Virginia. Negroes were found to be superior to whites and girls to boys. However, as the musically untrained and culturally retarded pupils generally made the poorest scores and as the training, cultural, and motivational variables were not brought under experimental control, the racial and sex differences reported are impossible to interpret.

One of the most persistent problems in the field of musical capacities, the issue of the improbability of pitch discrimination, seems finally to have been satisfactorily settled by the recent work of Wyatt (65). The Seashore pitch measure, oscillator tests, and a pitch test of Wyatt's own devising were given to eight music and eight non-music students who were then trained over a considerable period of time in the art of pitch discrimination. Not only was enormous improvement disclosed but the benefits were shown in octaves other than those in which the training took place. This work would seem to put the "pitch weak" in the class of the nonreader. If a child does not acquire the full concept of pitch or the technic of good reading in the early grades, it will be difficult but not impossible for him to achieve more adequate responses when he becomes an adult.

A study somewhat paralleling Wyatt's in its conception was that by O'Brien (39) who tested two groups of boys on the Kwalwasser-Dykema

Quality Discrimination Test. One group was then drilled for three months on the recognition of instrumental tones. Later retests showed no appreciable improvement in either group, a finding which would not have been anticipated by the reader of Wyatt's study. It was most regrettable that reliance was made on a test whose reliability is so low. Had the new Seashore or some other good test been employed, meaningful conclusions might have been possible. At present the findings must be considered as decidedly tentative in nature.

After the employment of a number of musical and other tests on 200 high-school students and the application of factor analysis to his data, Karlin (19) concluded that there is no *general* auditory factor which could describe his correlational matrix. He found instead some eight group factors which apparently had to do with pitch-quality discrimination, loudness discrimination, auditory span function, memory span, and a number of Gestalt phenomena. Lundin (25) has added to our list of music ability tests measures of interval discrimination, melodic and harmonic transposition, and melodic and harmonic sequences. He has reported reliabilities of approximately .73 and validities (based on the pooled ratings of teachers) ranging from .13 to .61. Madison (26) has made an exhaustive study of the entire problem of the discrimination of intervals, and has constructed a test in this area which has a retest reliability of about .75. This new measure correlates from .52 to .71 with measures of tonal learning and from .60 to .72 with grades in music dictation and sight-singing.

Perception and Learning

It has been suggested by Varro (56) that there are five life stages in musical development, each of which raises rather different problems for the teacher: babyhood, preschool period, elementary-school days, pre-adolescent period, and period of adolescence. O'Brien (38) has reopened the controversial problem of whole versus part learning and has come to the commonsense conclusion that, in the main, the part method is a little more economical. However, as we still do not know how large a "part" may be before it ceases to behave as a "part," it is difficult to carry over O'Brien's finding to other musical situations. An investigation of some of the factors which lead to the efficient reading of piano music was made by Lannert and Ullman (24) on nine advanced piano students. Long-continued practice in sightreading was found to be a prime necessity for good reading. The pupil should try to perceive both right- and left-hand scores at a single glance, know the leger-line notes, keep ocular contact with the score, preview time and key signatures before starting to play, and attempt to train the imagery.

Another of the periodic attempts to condense history into a few laboratory hours has been made by Krugman (23) who by playing both "classical" and "nonclassical" compositions to seven subjects once a week for eight weeks was able to alter the feeling tone toward these pieces from

one of indifference to a state of pleasantness. Contrary to what the present reviewer found many years ago (unpublished data), Williams (60) could detect no changes in the feelings of her 400 subjects toward a Bach overture when, after playing it along with other serious compositions, she mixed it in with fox trots. The order of presentation seemed to have no effect on the degree of acceptance. One possible explanation for this surprising finding is that nowadays Bach is often surrounded by jazz on our radio concerts. Thus we have been "trained" to change our attitudinal sets with great rapidity. In earlier times we perhaps gave the setting more careful attention and so were more displeased when serious music and jazz were played on the same program.

Changing taste, as it is reflected in the repertoires of many of the world's greatest orchestras and opera companies, has been extensively studied by Mueller and Hevner (36). Their work has emphasized the fact that each composition has, in theory, an optimum number of repetitions which will elicit maximum enjoyment. With repeated hearing there are at first increasing aesthetic returns. Later, a law of diminishing aesthetic returns appears to operate. Musical taste is learned just as any other set of folkways is learned, and obeys the social-psychological laws of folkway behavior.

During the time span of this review, there has appeared Jacobsen's concluding article in his series on eye-movements in reading vocal and instrumental music (18). His work has made it clear that the mere training of eye-movements will not necessarily lead to efficient reading. He has recommended the use of flash-cards, concentrated drill by the instrumentalist in the reading of the bass clef and leger lines, and more detailed study by the vocalist of the larger and ascending intervals. Immature readers, he has found, tend to sing sharp, to be slow and inaccurate, to recognize less than one-half a note per pause, and to spend equal time on words and notation. Mature readers were found to sing flat if in error, to be both fast and accurate, to recognize between two and three notes per pause, and to spend two-thirds of their time on notation. Weaver (58) has been continuing his doctoral studies on the eye-movements of trained musicians. Reading pauses were found to last from a quarter to a half a second, with between one and two notes executed per pause and three to five notes perceived in one span (note that Jacobsen's value was smaller). The treble parts of chords were usually read before the bass parts. Reading was found to be accomplished thru both vertical- and horizontal-type movements, the former predominating in the playing of minuets and the latter in hymns. In another study with Van Nuys (55), Weaver found that memory span decreased roughly as the complexity of the note relations increased. The melodic and rhythmic factors functioned as limiting conditions except when they were extremely simple.

"It has generally been agreed that the reason listeners tend to prefer "low fidelity" to "high fidelity" in the tonal qualities of their radios is

that the unfortunate experiences of a lifetime with radio tones of poor quality have conditioned their tastes. Chinn and Eisenberg (9) have attacked this learning hypothesis by demonstrating that the "low fidelity" is preferred by the musically sophisticated as well as by the naive. This preference persists even tho the listener is told that a wider tonal band is mechanically closer to the sounds of real life. The authors feel that these data tend to confirm the hypothesis that we prefer what we do because it sounds better to us and not because our tastes have been spoiled. The reviewer finds it difficult to follow this line of logic, for why cannot even the musician possess one set of listening habits for the orchestra and another for his radio? One can point to many close parallels in other areas of psychology.

Therapy

An extensive literature is being accumulated on the therapeutic effects of industrial music (3, 54) and on the good that music can do the hospitalized (1, 14). There are also many articles on the morale-building aspects of music (6). While this topic does not directly concern the music educator, it should perhaps be considered briefly as there may well be some carryover to educational situations. Admittedly, most of the studies in this area are anecdotal in character and almost completely without scientific controls. Yet more and more it is becoming apparent that music can serve as a medium for the projection of psychological conflicts (63). Thru music the child may obtain a much needed mental catharsis. And while it is still a moot question whether the output of even repetitive work is increased appreciably by the hearing of music, there is no doubt but that many listeners tend to feel less tired and bored (21, 22, 30). It is also clear that music can serve to enhance in-group feeling and social solidarity.

What Music Tells and Does to Feeling

While the linguistic possibilities of music (43) have been under consideration for centuries, they have been put under scientific scrutiny only within the past few decades. But we can now say with considerable assurance that music has no extensive semantic or *meaning* value that has not been put into it by training. Thus, those of us who possess tonal-visual associations which differ markedly from those of Walt Disney may have found his *Fantasia* extremely distasteful (13). That most of us do have tonal-visual associations has been shown in a number of researches at Dartmouth College (20, 40). Informal and incidental training can attach associations to our music so that it in turn can elicit *moods* which are shared in considerable degree within any given culture area (8, 17, 46, 62). These associations which we hold in common are reflected to some degree in our agreements on tonal preferences (27).

One would suspect that the presentation of program notes should affect, in some degree at least, our musical enjoyments. That such an effect is

present has been demonstrated by Williams (61), who found that the modification of preference due to the use of program notes varies directly with the amount of musical training the reader has had. The psycho-analysts, in keeping with their dogmas, maintain that the mood responses which music elicits are fundamentally bound to innate forces within us. Thus, Montani (32) has claimed that the minor modes are associated with those feelings and moods which characterize the castration complex. Gardner and Pickford (15) have illustrated the great importance of context in music. Dissonance, they found, varies with the physical composition of the chord, the listener's experience, training and traditions, and the musical "intent" of the passage as a whole.

Pedagogy

A book which will be of value to only those teachers of music who have never taken an elementary course in psychology is that written by P. C. Buck, a British professor of music (7). This tiny textbook is an undocumented "rewrite" of a more scholarly manuscript which was destroyed in 1939 by the Luftwaffe. The teacher who wishes to demonstrate to his classes how foreign culture elements are brought into a new culture, and how they modify it and are then modified in turn, should read Slotkin's article (52) on the interrelations of Negro popular music and "white jazz." And if, after reading the present review, the musical reader still believes that taste is not a folkway but emerges instead from biological structure, he may wish to read Rashevsky's thought-provoking but highly technical articles (44, 45).

The teacher of music who desires an exposition of the physical dynamics of music should read the recent articles by Pepinsky (42) and Stout (53) which were written particularly for people with his training and interests. If he desires, instead, illustrations and accounts of tone quality, he should become acquainted with the article by Borchers (5) and particularly with that by Seashore (51), in which a diagram of the quality characteristics of a beautiful vocal tone is given and the characteristics are analyzed. If our hypothetical music teacher is more interested in the violin tone, he should note the article by Masters (28) in which an analysis of the overtone spectra of the author's own violin is given. More general articles of worth on the physics and psychology of tone are those by Pepinsky (41), by Young (66), and by Miller (31).

Needed Studies

To the reviewer it would seem that the psychology of music is weakest in the area where it touches social psychology, anthropology and educational sociology. The music educator tends to know so little of the work done on folkways that he too often holds blindly to absolutes in music and so accepts less readily than he should data which demonstrate the folkway-nature of his tools. That this weakness has been recognized by others is

shown by the fact that a new curriculum is being introduced at Julliard which will stress the social sciences. The music educator is rarely a virtuoso performer. He is rather a professional worker who has unique opportunities to increase human satisfactions. To make the most of these opportunities he must be fully aware of the social forces around him.

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INTRODUCTION

As we passed from the cessation of major hostilities to the struggle to build a satisfying postwar pattern of life, efforts have been made to make peacetime applications of the mental hygiene ideas and technics developed in response to war needs. Among the wartime developments that can be reconverted for use in industry, education, and the professions are methods of selecting leaders and a cautious use of group screening devices for quick appraisal of certain characteristics. Group therapy is one of the most important of the new applications of psychiatric treatment.

Social conditions contributing to family disorganization, disturbed status, and delinquency form a background against which measures of the improvement of mental health must be considered. Unless verbally expressed social values are translated into action, we cannot expect personal or international peace.

Despite war conditions, mental health in schools and colleges has received considerable attention during the last three years. Clinical studies continue to emphasize the importance of an individual's early experiences, especially parent-child relationships. Among the interrelated conditions conducive to the mental health of the school child and adolescent are the curriculum, methods of teaching, policies of promotion and marking, and enriched life experiences. Research and clinical studies reinforce the point of view that an understanding of individuals plus effective counseling and group work is basic to good mental health. Clinical studies especially give insight into conditions that influence adjustment and into the devious ways in which children and adolescents try to come to grips with reality.

Beyond the school walls, home and school conditions affect the mental health of individuals. A beginning has been made in studying the influence of forms of government and political systems on mental health. Likewise the effects of the war, of socio-economic and class status, and of different cultures are being explored. Delinquency has been given special attention and numerous programs for the prevention and treatment of delinquency have been described, but not evaluated by research workers who can view them objectively.

A valuable new feature of this issue is the chapter on contributions to mental hygiene from the field of comparative psychology. Experiments with the lower animals suggest ways in which behavior disorders and seizure states are induced by demanding excessively fine discriminations, by confronting the animal with impossible tasks, by creating conflicts, by imposing constraint that prevents the animal from substituting other ways out of the situation. Of the various methods of treatment, the most effective involved to the situation.

The tendency to experiment in this field without adequate instruments for measuring results is still strong. Moreover, the complexity of counseling

and psychotherapy, including the individual differences in response to different methods of diagnosis and treatment makes a truly controlled experiment practically impossible.

Progress has been made in the clinical use of psychological tests and in the development of screening devices. More complete and dynamic clinical histories enable the worker to evaluate the therapeutic processes employed. The gap between the definition of personality as a dynamic organization and its measurement is being bridged by the study of syndromes, patterns, and clusters of measurable aspects. Of the various kinds of therapy, shock therapy is being used more conservatively and cautiously; group therapy, more widely and enthusiastically.

In the field of health education investigations relating to school health policies, administration, and content of health education have been made. Methods of motivation and teaching is a wide open fertile field for research.

Underlying school learning and health are the school health services. During this three-year period the educational aspects of school health service have been emphasized and research has shown that the teacher is competent to carry out his important role in the health program.

Evidence has been presented of greater individual growth in height and weight during the past fifty years. Altho the control of communicable diseases has not yet been achieved, experimental work in air sanitation by means of ultraviolet rays, germicidal sprays, and dust-suppressive measures is promising. The evaluation of school health services, health education, and physical education has led to the development of special statistical techniques and newer methods of measuring health status, attitudes, behavior, and physical skills.

Some progress has been made in the quantitative assessment of physical fitness, motor skill, and general bodily efficiency. Evidence of the effectiveness of physical training programs geared to individual needs is accumulating. In the newer field of rehabilitation thru physical education activities, practice and theory are paving the way for research. This is the most recent issue of the REVIEW in which the contribution of physical education to health has been reviewed.

In most of the other chapters a continuity has been maintained by keeping the same titles and in several chapters the same authors as in the two previous issues. This issue covers references from July 1, 1943 to July 1, 1946.

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CHAPTER I

Trends in Mental Hygiene

JOHN D. M. GRIFFIN and WILLIAM LINE

THE LAST three years have seen the climax and the close of World War II, and the subsequent chaos of a world left weary, cynical, and struggling to resume life on a peacetime pattern. While "peace" is always a relative term, the year just past can hardly be called peaceful, save in the sense that major hostilities have disappeared from the world scene. In their stead, however, there exists a seething restlessness, a bitter and irritable distrust among individuals, groups, and nations.

In such a time as this, workers in the field of mental hygiene are particularly challenged. So many events of major social and emotional interest are happening, that there is difficulty in finding time to take stock, or to develop a perspective. Yet those disciplines which come together in the mental hygiene interest must indeed assume the responsibility which is basically theirs, and clarify to the utmost their immediate and long-term objectives. Today, as never before, world sanity hangs on the virility of the dynamic social sciences, and on the direction charted by them.

Changing Interests in Mental Hygiene

Looking, first, at the current scene, one finds many evidences of changing emphasis in mental hygiene activities. During the war years, interest was focused on problems of military selection, and on the development of emergency and short forms of treatment for psychiatric casualties. Recently there has been a swing towards problems of rehabilitation and reconversion, with serious efforts at adapting the experience and technical advances gained in military settings to the needs of civilian life. Similarly, industrial mental hygiene has had to swerve from its emphasis on emergency selection of workers and on efficiency and morale under wartime motivation, to the far more difficult and subtle problem of interpersonal relations under post-war conditions; and the measure of this challenge is reflected in a degree of labor unrest far beyond that which was popularly anticipated.

Second, the mental hygiene workers themselves have suffered a marked change. During the war, they were mobilized by an international emergency, and had to cope, rather frantically at times, with practical problems of great moment. Having once emerged from the cloistered protection of the universities or from the placid despair of the mental hospital service, they are loath to return to any setting where their contribution assumes academic, philosophical, or merely custodial guise. They demand practical scope in the world of affairs—in industry, education, government. Even the tangible successes of private practice are satisfying only in a measure; they

must be supplemented by realistic application of the insight gained thru individual psychotherapy to the body politic itself.

Third, while education has had little opportunity during the war years to develop new technics or make striking advances of mental hygiene importance, nevertheless the educationist has been aware of the changes which have been tried. In consequence we are in the midst of a period wherein education is engaged in putting many of the ideas and technics tried in wartime to the test of experimental investigation and peacetime application.

The Effect of the War on Mental Hygiene

The general consensus seems to be that the actual physical violence of warfare has had less effect on the emotional stability and mental health of people, whether as fighting men or as home-front workers, than have the social and emotional factors of separation, evacuation and broken families.

Several authors have vigorously stressed the importance of selection. Technics employed in the psychiatric selection of officers have been shown to be particularly applicable in the fields of industry, education, and the professions (8, 4). During the war, psychologists were busy developing short objective group methods for screening service candidates. The practical use of such tests in civilian fields has already been demonstrated. This emphasis on short objective nonprojective tests is not without its dangers, however. There seems to be a tendency for many psychologists, and laymen who call themselves psychologists, who have had some experience with these short tests in the military services, to exploit them in the field of business and industry. The experience of World War I should be remembered. Psychological tests received a great deal of attention and publicity at that time only to be largely discredited subsequently. Unless psychologists and personnel workers recognize the importance of the qualitative evaluation of the individual by means of personal appraisal during the interview, or during the individually administered test, the whole fabric of psychological selection and placement may fall apart (6).

In reviewing the advances achieved in psychiatric treatment during the war, one is left a little skeptical that anything really new was discovered. Nevertheless, it is undoubtedly true that many new ways of applying old technics were demonstrated and have been shown to be useful in civilian life. Among the most important of these is group therapy. This had its beginning and was well established before the war (18). Group therapy now can hardly be described as a single technic. There are as many variations in actual procedure as there are psychotherapeutic points of view. It is an interesting fact however, that in spite of these differences in approach, all methods of psychotherapy in groups involve not only the effect of a leader on an audience of patients, but the effect of the group itself on each individual patient and the effect of individuals in the group on each other. This social and emotional relationship which has been shown to be so valuable therapeutically can be used with children in the classroom. Indeed the

method of using this type of discussion in teaching has long been recognized as a sound pedagogical method. The new trend in applying this technic to the classroom situation would seem to lie in the importance of estimating and utilizing the effect of different loadings of different types of personalities within the group. Thus, the Orthogenic School in Chicago is experimenting with the idea, long recognized by Fritz Redl and others, of mixing an appropriate number of aggressive children (for example) with children of a recessive type in an effort to capitalize on the therapeutic and prophylactic aspects of the internal structure and interpersonal relationships within the group.

Another development emanating from military experience was the intense effort to capitalize on the very intense medical interest in psychiatric aspects of rehabilitation. This was the keynote of a valuable conference of psychiatrists, sponsored by the National Committee for Mental Hygiene, at Hershey, Pennsylvania, in February, 1945 (5). The Veterans Administration has been quick to capitalize on this broad interest and is establishing excellent rehabilitation services which include not only clinical treatment facilities but mental hygiene units as well.

Of interest here to the educationist is the counseling service established by the Canadian universities in association with the Department of Veterans' Affairs. In an extension of rehabilitation counseling, begun prior to discharge, and continued during the period of reentry into civilian life, all ex-service personnel taking advantage of university training benefits have access to an advisory bureau, staffed by professional competent workers. Such a setting provides the basis of careful and intimate liaison between University Health Service and the teaching faculties, between academic and employment phases of the training courses. Its outcomes should be of great significance to the revitalizing of college mental hygiene and to educational guidance generally.

Turning for a moment to the broader fields of general medicine and social work, one may observe an intensification of interest on psychosomatic problems, as a result of military experience. The training programs in medical schools, both undergraduate and postgraduate, and in schools of social work have been modified as a result of this trend. Much more emphasis has been placed now on an appreciation of personality development and its influence on the clinical picture whether of physical symptoms or of social disability (16, 19).

Effects of War on Social and Economic Conditions and Mental Health

There have been some interesting studies of the effects of the war on social and family life, which in their significance in terms of postwar developments must be regarded as important as those emanating from the armed services. Levy (9) demonstrated, for example, that the effect of war on family life can be either beneficial in the sense of providing a general

stabilizing influence and a better economic situation, or it can be demoralizing and shattering, depending as one might anticipate, on the resources within the personality makeup of the individuals concerned. The effect of the very tight labor market during the war was to provide a state of almost full employment. Many thousands of people who were previously regarded as unemployable, either because of physical or mental handicaps, were put to work (12). Women and adolescents were also employed to a greater extent than ever before. Reconversion has substituted the more poorly paid peacetime factory work for the preferred highly paid war jobs. Women are generally unwilling to release the advantageous position of being independent wage earners in order to return to the role of the housewife. On the other hand, women are often unwilling to work for comparatively low rates of pay. Adolescents plucked too early from school and given streamlined training in war-plant trades are reluctant to return to school.

Many factors of this kind are at the root of climbing delinquency rates. Probably one of the most important indices of the social, emotional, and moral maladjustment of the nation is the juvenile delinquency rate. All kinds of factors, reasons, and excuses have been advanced to explain why there should be so much criminal behavior (1). Everything has been suggested from radio programs to the tendency of the adolescent to emulate the fancied behavior of his father or older brother in the fighting services. Many worthwhile and constructive plans have been put into effect in communities across the country. Most of these efforts have taken the form of increasing the facilities for leisure time activities for the age groups involved. It would appear that while supervised leisure time is important as a prophylactic measure, it can hardly be regarded as a basic remedy. Delinquency, like neurotic illness, is a symptom of personal maladjustment.

Increased Public Interest in Mental Hygiene and Psychiatry

It is of some interest to note the increasing consciousness of the public towards psychiatry and mental hygiene. It is astonishing to note the number of current movies and radio programs which are based on psychiatric themes. Some of these are gloriously but unwittingly burlesqued. In others however, a serious attempt has been made to obtain professional technical advice. Psychiatry has even crept into the everyday conversation and jokes of the people. In this setting of heightened public consciousness, the publicity which a year or two ago was given to the psychiatric war casualty found a ready response. Some of the effects of this publicity were hardly constructive and the anxiety and concern which were engendered in the families of servicemen and in industry, concerning the possible difficulties of rehabilitation, were exaggerated out of all proportion to the facts.

More recently the woefully inadequate facilities for the care and treatment of the insane in our state mental hospitals has received dramatic publicity (13). Typical of the more constructive outcomes of such exposés is the organization of a lively citizens' group in Ohio, The Ohio Mental

Hygiene Association. This organization seems determined to utilize a sympathetic public opinion in order to improve and renovate the state mental health services. Similar movements are starting in other states. In interesting contrast to the actual conditions in mental hospitals, is the recent publication of the American Psychiatric Association of "Standards for Psychiatric Hospitals and Out-Patient Clinics" (20). The Association has recognized that these standards are presently met by few if any public mental hospitals, but have established them as goals to be achieved if possible within ten years. It is probable however that unless the attitude of the lay public evolves from one of curiosity and morbid interest to one of serious determination with recognition of the necessity for action, these standards will remain goals rather than achievements.

The Future of Mental Hygiene

Having traced a few of these trends in mental hygiene, is it possible to sketch future developments? What is the role of mental hygiene in the postwar period? Psychiatrists have not been backward about telling the public in a forthright and dramatic way about the dangers of a continuing "laissez-faire" attitude (2, 10, 14, 17, 21, 22). They have pointed out that unless the chimera of individual selfishness is forsaken, not only will mental health elude us, but the achievement of peace and international goodwill may become impossible. Various psychiatrists have placed their critical finger on a variety of weaknesses in our mental health habits. The American emphasis on an over-sentimentalized and commercialized "Mother," with resultant emotional immaturity on the part of our younger generation, has been described by Strecker (22). He has shown how this dependency on "Mom" can lead to social irresponsibility, selfishness and physical ineffectiveness, ill health, and low national morale. Chisholm (2) on the other hand, put the emphasis on the training and education of children. He rationally, with an appreciation of the basic assumptions which they are the fancies of fairy tales and the dogma of religion can be equally harmful influences on the mental habits of the child. They lead to the habit of unrealistic wishful thinking which has played an important part in causing unrepeated world wars.

Summary

First, there is a notable tendency for the chief disciplines involved to take stock. Education, for example, has its Harvard Report (3) and its searching essays by Livingstone (11).

Second, in recognizing the challenge, there is a marked tendency for each discipline to regard itself as basic to the whole field of progress in

mental hygiene. This is particularly true of those disciplines which have had active partnership in war affairs (15).

Third, and growing out of the first two, there is a tendency away from specialization in the division-of-labor sense, and towards partnership, co-ordination or overlapping of the several disciplines. Particularly noticeable has been the intimacy of psychiatry and psychology in service mental hygiene and in the development of clinical testing, and of particular promise, the extensive collaboration among social and biological sciences in social medicine. Similarly we find economics, sociology, and psychology coming together in realistic research institutes of industrial relations.

Fourth, totalitarianism has shocked us into a reemphasis upon the individual, the individual self-consciousness, and value of life, as of basic significance to all social services (2). Hence the general search for satisfactory understanding of the psychodynamics of personal development.

Fifth, this emphasis on individual personal life is happily grounded in a heightened social consciousness, stimulated by the world experiences of the past decade. It is certainly to be hoped that the sincere and realistic determination to place social purpose high in the scale of values—a determination that greatly characterizes ex-service personnel—will not be forced by frustration and disillusionment to give way to self-centered individualism. The greatest task of all confronting mental hygiene is probably this one, of keeping alive the conviction that the mental-social disciplines can and must point the way to the good life, and in so doing chart the course of development for the great society.

Sixth, in addition to the general points made above, Stevenson (21) emphasized the following developments:

a. The public mental hospital is suffering serious deterioration, which raises the question whether the system as now constructed can persist.

b. Federal legislation, giving extensive authorization for expenditure of funds under the U. S. Public Health Service, was passed in July, 1946. It provides for training, research, public education, and the initiation of clinical services.

c. A drastic shift is taking place in the field of psychiatric education in order that the general practitioner rather than the specialist in psychiatry may be benefited by the undergraduate curriculum. This means a shift in the focus of teaching from the psychoses to the psychoneuroses.

d. While teamwork between psychiatrist, psychologist, psychiatric social worker, and others had been established in child guidance clinics, it became a pattern widely used in the armed forces and has been carried subsequently into many civilian services, including the public mental hospitals.

e. The Veterans Administration has adopted the team basis of operation and has undertaken professional training on a wider and more seriously conceived basis than has ever existed before. On the other hand, it has not completely solved its inability to give outpatient service to the man disabled in line of duty, altho it is giving considerable service to the veteran whose disability is not service-connected.

f. Group therapy came in for extensive experimentation by psychiatrists, psychologists, and social workers in the armed forces and some of this is being carried over into civilian services. This increased attention made much more evident the diversity of group therapy.

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CHAPTER II

Mental Hygiene in Family Life

HAROLD H. ANDERSON

DURING the past three years there has been a definite trend toward greater emphasis on the environment as a factor in mental hygiene. Examples of this trend may be noted in several areas of family life, in the research relating to nutrition, feeding, and food problems, in the studies which have dealt with many aspects of child care, and in several attempts to investigate the relationship between mental health and general home conditions.

Nutrition and Food Problems

First, consider the studies on nutrition, feeding, and food problems. Spock (42) concluded that the basic cause of feeding problems is the mother's anxiety. The great proportion of feeding problems, he said, begin in the first two years of life. Occasions when feeding may become a problem include the time of the introduction of solid foods in the child's diet, the period after illness when the appetite is slow to return, or at forced weaning from the bottle around one year. Few children, he found, lose their appetites spontaneously after the age of four or five years. Baldwin (3) rated seventy-two children on three aspects of their feeding behavior, appetite, finicalness, and table behavior and compared these ratings with other variables as to physical status, home environment, and the child's personality. MacKenzie (28) discovered that a group of 355 bright elementary-school children had better nutritional status than 357 slow children.

Child Training

Another example of the emphasis on environment as a factor in mental hygiene is the research in several areas of child training. Skinner (40) described his mechanical baby tender; a closed, insulated, crib-size compartment, with heat and humidity controls, and a roller-towel arrangement for a sheet ten yards long, sufficient to last a week. Huschka (25) reported the training in voluntary control of urination in 215 problem children, concluding that dryness before the age of two may be considered premature. Aldrich, Sung, and Knop (1) found a negative correlation between crying and nursing care of newly-born infants: the more care, the less crying. Read (35) arrived at two conclusions of interest to parents. Using the Stogdill-Goddard questionnaire, Read studied the attitudes of parents and compared them with the children's behavior as rated on sixty-seven traits of the Read-Conrad *Abbreviated Behavior Inventory for Nursery School Children*. Child behavior was found unrelated to parents' views

regarding desirable child behavior, but was positively related to liberalism in views on parental control. Prevey (32) reported that among 100 families boys received better training than girls in the use of money. She listed forty-five references. Bunker (10) concluded that children will not participate in sports in later life unless fundamental motor skills and favorable attitudes toward play are established before the high-school years.

Childhood Traits and Mental Health

A number of studies have continued the search for later effects of factors appearing in childhood. Gardner and Goldman (20) studied the preenlistment histories of 500 consecutive unselected sailors confined to disciplinary barracks and of 200 sailors who had never been subjected to disciplinary action in the Navy. Seven factors, in order of their appearance in the disciplinary cases and relatively infrequent in the control group were: broken home, truancy, expelled from school, retarded three or more years in school, persistent enuresis, runaway civilian arrests, and atypical sexuality.

From intensive life histories of twenty-five college women selected because they were typical of a larger group of 100 cases, Roberts and Fleming (38) reported that in every person a nucleus of traits persisted from childhood to adulthood. While some traits fluctuated, there was more persistence than change. Both case studies and statistical analysis showed that personality is related to the kind of relationship existing in the home.

From clinical data in an institution for delinquent boys Church (12) found that success in treatment depended on the quality of the boy's interpersonal experiences in infancy and childhood. In case records of twenty-seven children who later became psychotic, Friedlander (18) discovered in the background of both dementia praecox and psychopathic personality patients parents who had been either extremely rejecting, over-solicitous, or over-protective. She also found extremes in home discipline and friction.

"Only" children in three college freshman classes seemed to Dyer (17) to be as well adjusted as other children, and were found by Banister and Rayden (5) in about equal proportions among groups of "normal" elementary-school children and children referred to the Cambridge, England, Child Guidance Clinic.

Occupational level was not a factor in the maladjustment of 4450 school-aged children, according to Dawson (14); more than half of these cases, coming to several clinics in England, revealed unsettled homes, parental dissatisfaction, and marital unrest. Among six cases of boys eleven to fourteen years of age involved in homicide, Patterson (31) found outstanding characteristics to be mother-attachment and father-hatred.

Family quarrels were also reported by about one-third of several thousand high-school pupils in a study by Punke (34), the main bases of the conflicts being economic matters, social life of the children, and personal habits of the parents.

An outstanding study of parent-child relations is Levy's (26) monograph on maternal overprotection. Levy described the method used in selecting twenty cases for detailed study, the types of overprotection encountered, special problems of the overprotected child, and methods of treatment of child and parent. Wolberg (45) differentiated two types of parental rejection; rejection of a hostile nature, and rejection in the form of neglect. Clothier (13) discussed the treatment of the rejected child, pointing out that guidance clinics use a variety of poorly defined psychotherapeutic techniques in attempting to modify "destructive maternal attitudes" affecting the child.

Encouraging to a mental hygiene reviewer are a number of studies attempting to define and measure *positive* family relationships. Baldwin, Kalhorn, and Breese (4) used a combination of clinical and statistical methods and the Champney parent behavior rating scale. Two of three central syndromes were labeled "Democracy in the Home," and "Acceptance of Child." The third was "Indulgence." Seven common patterns of behavior were described in detail with illustrative case material. Another study which illustrates the range of positive approach to family relations is that by Bossard (9) who listed thirteen arguments for the value of owning domestic animals.

Merrill (30) made a direct observational study of the stimulus properties of the mother's behavior toward her preschool child in a standardized play situation. Data in eleven of thirty-two categories were analyzed. Thirty mothers were divided equally into experimental and control groups. At a second session the experimental mothers were given to understand that the child's previous play performance had not realized his capabilities. From first to second sessions the experimental group showed a significant increase in directing, interfering, criticizing, and structurizing-a-change-in-activity types of behavior.

The Henrys (23) studied family attitudes of Pilagá Indians thru the medium of doll play of children.

Dinkel (15) constructed a scale to test attitudes of 1006 college students and 318 high-school students toward supporting aged parents. The obligation to support aged parents was held more strongly by Catholic and rural groups than by Protestant and urban groups, respectively. The degree of hardship affected the attitudes of all groups. Dinkel concluded that the obligation of children to support aged and needy parents is apparently no longer well established in the mores.

Special problems of parents and of children are represented in three studies. Loughlin and Mosenthal (27) discussed personality disturbances in 114 diabetic children. Three-fifths of the children maintained normality in all respects. Price and Putnam (33) illustrated with case histories their discussion of the effect of intrafamily discord on the prognosis of epilepsy. Rheingold (37) summarized factors involved in interpreting mental retardation to parents.

Home Conditions

Research during the past three years as noted earlier has revealed a growing emphasis on the interaction of the individual and his environment. Examples of such approaches are the monograph by Washburn (44) reporting three levels of psychotherapy in the treatment of parents of children enrolled in a nursery school, and reports of group psychotherapy with parents by Amster (2) and by Durkin, Galatzer, and Hirsch (16).

Case records of forty-four children who had at least one alcoholic parent were reviewed by Holden (24) who concluded that treatment is less likely to be successful with this group than with unselected clinic referrals. Roe, Burks, and Mittelmann (39) reported on the adult adjustment of foster children whose parents had been alcoholic or psychotic. In a follow-up study of 744 children, seventy-eight who had been placed in foster homes before the age of ten were available for study. Altho one-third of the children showed evidence of various sorts of maladjustment, and altho 40 percent of the foster homes were rated unsatisfactory in emotional background, the children showed later satisfactory adjustment, with few exceptions leading demonstrably useful lives. The authors reported that those whose foster parents loved them as children and were not severe with them seemed to have a better chance of achieving a well-adjusted personality. They added a further note that the high incidence of alcoholism and psychosis reported in the offspring of alcoholics cannot be explained solely on the basis of any specific heredity.

Psychological factors involved in the first sight of the child by prospective adoptive parents were discussed and illustrated with case studies by Bernard (6). Increasing evidence on the adverse effects of institutional life is shown in such studies as that by Goldfarb (22) who had two groups of forty children each. One group included children who had been in an institution from early infancy to about three years; the other group had been in foster homes from early infancy. Except for withdrawal behavior and anxieties related to intrafamily relationships in which foster home children tended to exceed the institutional children, the foster home children tended to show lower incidences of the several kinds of problem behavior included in two checklists. Banister and Rayden (5) reported a strong association between problem children and broken homes, but they suggested that this association may to a considerable extent be due to the psychological effects of instability in the parents.

Housing and Its Effect on Mental Health

The John B. Pierce Foundation supported a series of studies attempting to discover what kinds of houses would better fit the needs of man. Among these, Blum and Candee (7) reported on family behavior, attitudes and possessions. By a very ingenious photographic method they were able to record the design of cubic areas for different common household activities.

How much space does a man need in the morning to put on his sox? They found the answer, for certain men. But they pointed out that the sum of the "activity envelopes" does not make a home. Remmers and Kerr (36) also worked on the problem of evaluating the home. By means of the American Home Scale they studied the homes of 16,445 eighth-grade children in forty-two cities in twenty states. They reported that as a direct and valid measure of the goodness of living, functional income, and personal factors, the American Home Scale compared favorably with Thorndike's scales.

Children in Wartime

Among the many publications about children in wartime, the few which merit consideration as research were mainly observational studies, the analysis of data from questionnaires, or the tabulation of items in clinical records. Carter (11) summarized and evaluated the methods of studies on attitudes toward war which appeared since 1931. Gardner (20) dealt with five aspects of child health: physical, mental, social, spiritual, and social ill health (delinquency). From a review of some of the literature and a few clinical and court statistics he concluded that the health and behavior of children in the United States had not changed much for the worse since our entrance into the war, except in older adolescent groups. Sontag (41), writing on war and fetal-maternal relationship, suggested that susceptibility to disease in infants may be due to the chemical physiological aspects of severely disturbed maternal emotions. The effects of war, as such, on children have been minimized by such studies as that by Bonte and Musgrave (8), Gardner and Spencer (21), Twente (43), and McClure (29).

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CHAPTER III

Mental Health in Schools and Colleges

JUDITH L. KRUGMAN and MORRIS KRUGMAN

RECENT years have witnessed accelerated attempts at articulation between mental hygiene and the newer curriculums, particularly at the elementary-school level. Child development, learning readiness, mental health, and personality development are now frequently treated as part and parcel of the curriculum, rather than as distinct and separate entities. Some recent municipal and state educational publications read more like mental hygiene outlines than curriculum bulletins. Publications from Indiana (24) and New York City (7) illustrate this trend.

The Mental Health of the Preschool Child

The preschool group figures in many investigations attempting to trace personality deviations in later years. Spock (45) traced behavior problems of later childhood to parent-child tensions growing out of everyday situations in the early years. Kestenberg (26) found that separation of the child from parents early in life is more traumatic than later separation, and usually results in regressive behavior. Goldfarb (17) conducted seven research studies of psychologically deprived children in institutions and found that "the pernicious effects of the early experience persist even in the face of careful placement in selected foster homes, casework supervision, and, in some cases, psychiatric treatment." These well-controlled studies have tremendous implications for the mental health of children.

Child guidance workers have found a direct relationship between school phobias in the young child, confirmed truancy in the older child, and parent-child relationships. Klein (27) concluded that traumatic factors in early childhood, particularly punitive parents, coupled with increased tension at school, were responsible for the development of school phobias, and Edelston (14), working with young hospitalized children, came to a similar conclusion. The latter found that rejection, whether real or neurotic, produced anxieties in the children when they were separated from their parents. Washburn (48) approached the same problem positively and came to the conclusion that the general source of difficulty between parents and young children was the conflict between the child and civilizing influences. In this study, technics for therapy are discussed. All studies agreed that the parent-child relationship is one of the most influential factors in the emotional development of the child, and that the earlier in the life of the child this relationship is disturbed, the more profound and lasting will the personality disturbance be.

The Mental Health of the Elementary-School Child

Integration of elementary education and mental hygiene is well illustrated by a five-year experiment in elementary education in seventy New York City schools, subsequently extended to all the 700 city schools. Loftus and his associates (31) described this program from the standpoint of democratic living, personality growth, emotional security, and other mental hygiene aspects. "Helping Teachers Understand Children" (3), an extensive report by the American Council on Education on the training of teachers is a study of children's personalities as related to education.

Many studies dealing with elementary-school children treat various aspects of personality adjustment. Adams (1) questioned forty-two teachers from different schools about wholesome and unwholesome practices in their schools, and concluded that many practices caused inferiority feelings and fears in children. Sandin (41) conducted a study of promoted and non-promoted pupils, and concluded that nonpromotion was associated with many symptoms of poor adjustment. Lantz (30), using experimental procedures with nine-year-old elementary-school boys, found that experience with success resulted in better subsequent performance and in better personal-social adjustment, while failure served as a depressant, poorer subsequent performance, increased tension, and poor personal-social adjustment. Zander (50) induced frustration in a learning situation of fifth and sixth grade pupils, and determined that frustration causes nonadjustive behavior. Northway (36), utilizing the now popular social acceptability test, found that those falling in the lowest quartile of the test were usually shy, passive, and unliked, or noisy, rebellious, boastful, and likewise unliked.

Special Methods To Aid Adjustment

Various technics are employed for improving the classroom adjustment and mental health of pupils. One of the most widely used of the newer methods is the human relations class. Bullis, O'Malley, and Jastak (9) believe that mental disturbance may be prevented by bringing to the attention of children mental health concepts thru which they may formulate healthful attitudes. The method consists of classroom discussions on such topics as fear, tolerance, teamwork, emotional conflicts, and the like, using stories, books, newspapers, and other media. The social acceptability test is frequently used in connection with these classes, and the authors used it not only for determining social relationships in the classroom, but also for clues as to methods of influencing behavior and opinions among pupils.

The psychodrama continues to be used as a therapeutic device. Shoobs (42) found that this method served to decrease truancy and other antisocial behavior, and recommended it for personality and character development.

Flory, Alden, and Simmons (16), studying fourth-grade pupils with the California Personality Test, found that those who fell in the lowest quartile improved their scores to the median after one or two years when informa-

tion about these children was supplied to their teachers with the suggestion that they use their own devices for better personality development. Beckmann (6) used psychiatric observation technics to determine the nature of children in three "opportunity" classes for problem children. He found that the nine-twelve-year group suffered from primary behavior disorders; the ten-fourteen-year group showed a large proportion of neuroses; while in the twelve-fifteen-year group, delinquency and neurotic delinquency predominated. He also found that neurotic and delinquent behavior patterns were reduced by enriching life experiences.

Information about Problem Children

Wallin (47) obtained information from 145 teachers coming from 124 schools in twenty-five states about the availability of psychological or psychiatric services for school children and found the picture very discouraging. He concluded that almost no progress had been made in this direction in thirteen years. He recommended that teacher training in mental hygiene and child development be utilized to compensate for this lack. Cummings (11), studying emotional symptoms in young school children, concluded that overprotected children show "nervous" difficulties, while neglected children show more aggressive behavior, together with cruelty, lying, and stealing. Roe, Burks, and Mittleman (39) have made one of the most elaborate long-term follow-up studies of children and their conclusions have important implications for mental hygiene. Following up children of alcoholic and psychotic parents more than twenty years after foster home placement, they found that not a single child of psychotic parents became psychotic, and not one child of alcoholic parents was alcoholic. Practically all of them were leading useful lives, altho there was evidence of emotional disturbance among 30 percent. Personality adjustment was directly related to love and lack of severity in the foster home.

Mental Hygiene in the Secondary School

The mental health of adolescence has received extended treatment by psychologists, educators, and social scientists in two compendiums (8, 35) devoted to results of findings on this age group. Much of the research on adolescence concerned itself with methods of study and with aids in the classroom.

Methods of Studying Mental Hygiene Problems in School

Jones (25), in a longitudinal research study, presented a detailed treatment of a boy over a seven-year period, beginning at age eleven. He was one of 200 children studied at the Institute of Child Welfare, and is interesting not only for the method employed to study personality, but also for the illustration of the growth process and the problems of adolescence.

A very different approach was used by Mooney (32), who employed a checklist in a study of community differences in problems of adolescence.

Several reports containing suggestions to teachers for studying children were presented. Alsop (2) suggested the application of the Army methods for recognizing and helping psychoneurotic students. Roody (40) proposed the use of the Plot Completion Test for the same purpose. This test constitutes a framework from which attitudes are determined, as well as a basis for discussions in modifying attitudes. Kuhlen and Lee (28) studied social acceptability in grades six, nine, and twelve, and demonstrated the use of a social acceptability scale and a "Guess Who" test as measures of personality. Smith (43), in a study of 103 high-school students, used factors in the selection of friends, and concluded that friendship is a form of ego satisfaction.

Studies of maladjustment include that of Demerath (12) on the experiences and characteristics of twenty adolescent schizophrenics, and that of Wittman and Huffman (49), on the characteristics of psychotic, psychoneurotic, delinquent, and normally adjusted adolescents. Kvaraceus (29), from a study of 761 delinquents, mostly in grades six to ten, concluded that frustrating experiences within the school are a major cause of delinquency, and outlined what the school can do about curriculum, teacher training, child study, special services, and community cooperation, in developing a mental hygiene program.

Aids in the Classroom

Attempts to implement mental hygiene findings in high-school programs are found in guides to teachers as well as in experimental programs. Crow and Crow (10) described specific mental hygiene technics and materials for use in schools, and presented seventy case histories of adolescent boys and girls. These authors, among others, have also written a high-school text in psychology to help student adjustment. One of a series of resource units for high-school use in the mental hygiene of racial and cultural conflict is that of Powdermaker and Storen (37). Hellerstein (20) experimented with various "Adjustment Group" programs for failing students in the regular classes of the junior high school. Removal of pressure, lessening of competition, diagnostic study, an individualized sympathetic approach, and modified teaching methods, employed over a period of one year, decreased failure and discipline problems, and increased achievement.

The problems of freedom and authority were treated by Hacker and Geleerd (18), who found that disturbed adolescents showed better results when not given unlimited freedom. This has implications for education, and is in line with the findings of Lewin and Lippitt on the destructive effects of both the autocratic and anarchic groups, as compared with the wholesome effects of the democratically organized group.

Mental Hygiene in College

Altho numerous studies of college students have been reported in recent years, most of them can be classified in a few categories. Typical of elaborate studies of "normal" students is that of Heath (19), in which the clinical approach was utilized to obtain psychiatric, anthropometric, medical, psychological, and sociometric data. Another group of studies, typified by that of Houston and Marzolf (22), used a personality or problem checklist, usually Mooney's, to determine which students required special assistance in personality or emotional adjustment. The clinical approach to the study of college students by psychiatrists and psychologists has become more widespread. Murphy and Ladd (34) reported an extensive investigation, at Sarah Lawrence College, by the case study method, of common adjustment problems of students, emphasizing particularly the role of emotional factors in learning at college. Munroe (33) continuing her studies with the Rorschach Inspection Technic at the same institution, found the Rorschach Adjustment Rating, which is a measure of personality integration, to correlate well with teachers' observations and with later adjustments of the students. These ratings predicted academic failure better than did the American Council Psychological Examination scores. Fischer (15), using tests of frustration, measures of personality, grades and intelligence level, confirmed the findings of many studies that emotional factors exert a strong influence on failure to achieve scholastically. Hill (21), working with college freshmen who were relatively inactive in extracurriculum activities, demonstrated the value of individual counseling for social adjustment, when, after a year, the experimental group was active in greater numbers than a control group that had not been treated in this way.

Mental Hygiene and Teaching

Many writers clamor for the selection of teachers with "wholesome" and "well-adjusted" personalities, but very few do very much about selecting such personalities. Research in this area deals principally with methods of changing teachers after they have been selected. Di Michael (13) showed that a course in educational guidance did not change the attitudes of experienced teachers toward children's behavior problems, while a course in mental hygiene did. Baruch (5) demonstrated that teachers and teachers-in-training, after receiving training in the acceptance of children's and parents' emotional problems, showed great improvement in the acceptance of such problems; such improvement was generally related to the teacher's personal adjustment. Symonds (46) found that teachers solve their problems fortuitously, and that aid from another person would have helped them solve their personal problems more promptly and surely. Retan (38) found that, altho students judged emotionally unstable are less likely to be rated good teachers later than are those formerly rated as stable, many of the unstable ones nevertheless become good teachers later; therefore,

studies of emotional stability among prospective teachers should be used to aid them in their adjustment rather than for their elimination.

Comprehensive Reports

Altho numerous comprehensive reports of mental hygiene research studies have appeared in recent years, only three will be mentioned. Snyder (44) evaluated the literature on mental hygiene at the various school levels; Barker, Kounin and Wright (4) republished thirty-five studies selected as significant by a poll of experts; and Hunt (23) edited thirty-five representative research reports on personality and behavior disorders to form a basic handbook. These and similar encyclopedic volumes, of which there have been many, now make available research material formerly obtained only after painful search thru periodical literature.

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CHAPTER IV

Mental Health in Community Life

RALPH H. OJEMANN

SINCE the period under review covers the close of the war and the first postwar year, we find the problems of readjustment, rehabilitation, the effect of the war, and delinquency claiming a considerable share of research workers' time. Particular emphasis has been placed on studies of the effect of government and political systems on mental health and adjustment.

Effects of Forms of Government and Political Systems

Leighton, Spicer, and others (32) in an interesting article pointed out how basic knowledge concerning human behavior and motivation can be incorporated in plans of government and public administration. In a more extensive study, Leighton (31) applied the analysis of human behavior to the administration of the Poston Japanese Relocation Center in Arizona. He analyzed the discontent which was appearing in the community at the time the study was undertaken and then proceeded to show how, from the factors underlying behavior, a program of administration was developed which met the needs of the members of the community more adequately. The findings of this study are not only applicable to relocation centers but have great import for all forms of administration.

Several studies of the Nazi system appeared during the period under review. Abel (1) suggested several approaches to the analysis and understanding of German conduct. Wittenberg (47) described the problem of understanding children reared under the Nazi system. The development of the Nazi parent relates back to World War I when they were in their childhood, and their children in turn developed during their adolescent period under the Hitler regime. With a background of such experiences, present day Hitler youth are quite different and present a difficult problem for clinical diagnosis and reeducation.

That nonadaptive political attitudes may lead to serious mental difficulties has been proposed by Appel (3). He drew a parallel between isolationism and schizophrenic withdrawal from reality. Some interesting hypotheses as to the effect of mental deficiencies in rulers upon political systems were given by Norman (39).

Effect of Socio-Economic and Class Status

The effect of social stratification was studied by Cattell (11), Tumin (43), Carroll (10), Saenger (41), Humphrey (21) and Jones (23). Cattell has suggested that stratification and mobility may be a source of stress or a form of adaptation depending upon how it is used and the individual's attitude toward it.

Tumin (43) gave an account of an Indian in an Eastern Guatemalan pueblo who rejected the social convention of marrying within his group and married a daughter of the landowner and privileged class. Altho he was apparently an intelligent individual, he was accepted by neither group. He represented what the lower group desired and what the upper group feared—an attempt to secure equality between the two.

Carroll (10) in a study of concepts concerning lying, stealing, and cheating of 300 Negro boys and girls in an eastern section of Baltimore, found that the middle-class children disapproved of cheating, lying, and stealing mainly for altruistic or social reasons while the lower-class children tended to express their disapproval from a materialistic or nonsocial point of view. The middle-class children selected more successful adults as their ideal, whereas the lower-class children chose more glamorous adults. The movies seemed to play a very large role in forming concepts of "the ideal self."

An analysis of the relation of sociological status, as determined by income and religion, to political behavior was reported by Saenger (41). In a study of the voting trend in New York City over a period of several years, he found that differences in religion appeared to be more important than educational differences in determining the extent of political awareness. Furthermore, the decision to change parties was not closely related to an awareness of the differences between two parties. Group membership seemed more important than party platform. When the voter's opinion conflicted with the established party line, the party program was often interpreted in terms of the individual's own desires and beliefs.

Humphrey (21) compared the caste concept and race concept as to their relative usefulness in understanding Negro-White relations and concluded that the caste concept is the more useful since it expresses the socio-cultural data more accurately than does race.

In the Negro population of South Boston, Virginia, Jones (23) found a well-defined upper and lower class but no social group that could be called a middle-class. In its place was an amorphous group of individuals who were, for the most part, the more energetic and ambitious elements of the community. Competition for status was based more upon personal worth than one's family.

An extensive discussion of the effect of class differences on problems of education was given by Warner, Havighurst, and Loeb (44).

Mental Health in Different Cultures

A number of interesting studies comparing different cultures have appeared during the period under consideration. These included two investigations of Japanese culture. LaBarre (30) studied the Japanese internees at the Central Utah War Relocation Project. He described the Japanese personality as highly compulsive; and characterized by secretiveness, hiding of emotions, persistence, and a tendency to project its attitudes.

Kuhlen (28) obtained Pressey interest-attitude scores from 1589 Japa-

nese and 690 Chinese high-school students at the McKinley High School in Hawaii and compared the results with similar data from 1547 white children of comparable age and grade level in the United States. Analysis of the scores, based on American norms, revealed the Orientals to be relatively immature on the tests dealing with disapprovals and worries, but about equivalent to the whites on the interest scores. The Orientals tended to check worries about twice as frequently as the whites. The author suggested that this may be an indication of the emotional stress accompanying the acculturation process.

Whiting (45) in his study of the reaction of the Kwoma to frustration found that in the play group, which the child entered at the age of five or six, aggression led to retaliation by a person bigger and stronger, and submission became the most adaptive and usual response. Aggression toward younger siblings, unless it resulted in bodily injury, was approved by the child's parents.

Hsu (19) suggested that the incentive to work in primitive communities is essentially the same as that in modern communities; namely, self-interest. He felt there has been a tendency to exaggerate the differences between incentives, especially economic incentives, in primitive and modern communities. Beard (4) presented an interesting summary of child guidance in Mexico. The study of individual delinquents is being developed and methods for their rehabilitation are being improved.

Humphrey (20) investigated the extent to which the stereotype of Mexican-American youth; namely, "law-breaking zoot-suiter," corresponded to the actual behavior of Mexican youths in Detroit. The actual behavior varied greatly and it was evident from the different groups studied that stereotypes do not describe the situation very adequately.

Two studies, Pullias (40) and Kramer (27), pointed out some mental effects of western civilization.

Sectional Differences

Several interesting studies on sectional differences have appeared. Mooney (35) described some of the differences found among five Louisiana communities in the personal problems of secondary-school students. He used a checklist of 330 problems common to high-school students. Goodwin (15) studied the eastern shore of Maryland as an example of good personal adjustment in small stable communities. He suggested that the slow rate of change, traditionally clear definitions of relationships within the community, and the accessibility of the prerequisites for personal recognition are the factors which produce the favorable adjustment.

Mull, Keddy, and Koonce (37) administered the Bernreuter Personality Inventory to forty definitely northern and forty definitely southern college girls. No reliable differences in average scores for the two groups were obtained altho some evidence of less neuroticism, less self-sufficiency, and more sociability was found among the southern group. In another study,

Woodruff and Mull (49) used the Bell Adjustment Inventory for thirty-one southern freshman students and thirty-one northern freshman students at Sweet Briar College. Few differences were found.

James and Moore (22) obtained weekend diaries from 535 adolescents and analyzed the leisure-time activities. Saturday and Sunday activities were much more given to pleasure and were much more sexual in nature than weekday activities. They suggested that the conditions under which these adolescents lived tended to discourage the development of purposiveness and responsibility.

Drake and Cayton (14) presented an extended documental social history of the Chicago south-side Negro district and described the variety of problems presented by the Negro-White relations in this crowded urban section.

In a study of the factors responsible for the relatively lower personality ratings of rural children in comparison with urban children, Stott (42) found that in the nonfarm group occupational status was related to adjustment. Children of the common laborer class scored lowest. A factor important for all groups was quality of family life. Farm children attending village schools scored high in self-adjustment.

Effect of War

During this period a relatively large number of studies on the effect of war both in this country and abroad on various aspects of mental health appeared. A review of the literature with special reference to the present war was provided by Despert (13). Studies of the effect of war on mental health in England were made by Mackintosh (34) and Jones (24). Jones reported an increase in juvenile delinquency during the war of 57 percent in the community which he studied. Other studies of delinquency rates in wartime were reported by Burt (9), Chute (12), and Killian (25).

Community Planning for Rehabilitation and Readjustment

As the war drew to its close, interest in the development of community programs for rehabilitation and readjustment to civilian life of both citizens and veterans increased. This increase in interest was reflected in the appearance of a large number of articles, pamphlets, and books on counseling the veteran. An extensive bibliography of these references is provided by Klopf (26).

An extensive analysis of the causes of current crises and suggestions for intelligent planning for the future, based on knowledge from a variety of disciplines, was given by twenty-two contributors in a book edited by Linton (33).

Delinquency and Community Factors

Some interesting light on the relation of delinquency to economic trends was provided in studies by Wood (48), Bogen (6) and Wiers (46). Wood

studied the crime rates of seven Wisconsin cities and villages ranging between 1000 and 2000 population. Of twenty-four indexes which were correlated with crime rate, four were significant and three of these were indexes of economic prosperity. He concluded that incidence of crime in these communities is more closely related to the prosperity of these communities than to the kind of enterprise involved or to various demographic classifications. Bogen (6) reported from his study of juvenile delinquency in Los Angeles a strong tendency for delinquency to decrease during depression and to rise during prosperity. He proposed as an explanation of this finding the relaxation of parental guidance and tendency toward family disorganization during times of prosperity. Wiers (46) also noted a relation between delinquency and level of economic activity.

During the period under review, there was considerable interest in community programs for the treatment and prevention of delinquency (2, 5, 7, 16, 17, 18, 36, 38).

Further data on incidence of delinquency in various age groups was provided by Burrows (8) who also described a comprehensive program involving the entire community, and by Kvaraceus (29).

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CHAPTER V

Mental Hygiene, Health, and Safety in Industry

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POSSIBLY as a by-product of the war, the period 1943-46 produced much literature in psychology and related fields. But probably no period has been less critical of the material published. Much of that which has been printed consists of rewrites of previous literature.

Particularly has this been true in the field of industrial mental hygiene where there is a paucity of basic material. In this field, substantial research is needed far more than the printed word. Currently the need is for contributors who have gone thru the hard treadmill of training and who subsequently have applied that training against a background of working conditions.

Mental Hygiene Services in Industry

When national effort is required as in a war, national health, both physical and mental, immediately becomes of paramount importance. Unfortunately when the war is won, the promotion of national health generally declines. Too often in our history the nation has taken the attitude "billions for defense, pennies for health." As a result, the important strides in medical research and medical development have occurred during war periods. The recent war was no exception.

As the manpower of the nation was siphoned off for military duty, medical programs in industry developed. Most of the programs had as their prime objective prevention of physical or mental disease. This new concept of industrial psychiatry as a form of preventive industrial medicine was pointed out by Giberson (22). Many mental hygiene programs were developed during the war period. Those in larger companies, such as Dupont and General Motors, were described by Dershimer (12), Irvin (30), and Eadie (13) and the program at Oak Ridge, Tennessee, by Leggo, Law, and Clarke (35). Sometimes the psychiatrist was a member of the medical staff of the company and accepted as a fellow employee. At Sperry Gyroscope the psychiatrist was a consultant, outside the plant, and consequently the viewpoint was somewhat different (7).

During the war years many universities developed refresher courses in industrial medicine. Most universities tried to give some reference to the mental hygiene aspect and some papers were developed, as shown by Kindred (32), Potter (47), Howe (28), Coonley (11), and Kennedy (31). Many of the programs in mental hygiene are being continued as an integral part of the general medical program, rather than a specialty functioning separately.

Placement and Adjustments of Handicapped Persons

A step in the right direction during the war years was the change in attitude toward hiring physically and emotionally handicapped people, and the utilization of older people as shown by Stieglitz (55). On actual performance it was found that the so-called handicapped employees lost less time, had fewer accidents, showed more interest in their work, and had higher production records than the average employee. Slowly management and industrial medical groups have recognized that *proper placement* of individuals really determines whether an employee is handicapped or not.

Harvey and Luongo (25) studied the field of physical capacity for work. Wittmer (65) discussed the problem of a more wholesome attitude in the employment of emotionally and physically handicapped persons. An exceptionally thorough survey has been made by the Industrial Hygiene Foundation (29) covering the employment of the disabled veteran. Hostetler's (27) article on vocational training and placement of the veteran is well worth reading. Finally, and most important, management itself is beginning to realize its responsibility in this whole field as shown by Barrett (3).

Research in the Armed Forces Applicable to Industry

The wealth of work done by the armed services has not been lost but its correlation with industry's problem continues to be a necessary and intriguing task, undoubtedly due to the difference in the underlying psychology of a nation at war and a nation at peace. The literature covered every phase of normal and abnormal reaction thru the period from civilian to veteran and back to civilian. Good examples are studies by Strecker and Appel (56), Grinker and Spiegel (24), Menninger (39), Rusk (49), Freedman (17), and Solomon and Yakovlev (54).

Mira (41) gave a preview of the pattern set, as seen in the Spanish War. Many pamphlets were written about the veteran for the employer, the family, the community. Few were written to guide the soldier himself. One of the best was an Air Forces manual (59). Doubtless, as time permits, more and more industries will adopt technics and procedures that were worked out in the services on a large scale. One of the best articles published (16).

Women in Industry

Journals have had many articles based on the problems of women in industry. Numerous phases have been covered, many of them dealing with the differences between men and women workers, in time lost, abilities, and needs. Anderson (2) discussed the protection for industrial women, with emphasis on progress and prospects, while Kronenberg (34) discussed working conditions. Wishard (63) and Burnell (8) presented workable

health programs for women. Heyel (26) summed up the consensus in the field from the mental hygiene viewpoint.

Job Satisfaction and Dissatisfaction

Job satisfaction and dissatisfaction cannot be considered entirely as a personnel function in the narrow sense. Personal relationships in industry probably have more impact on health, certainly on mental health, than most people realize. Union activities (58), supervision (38), and interpersonal relations (33) are interrelated with job satisfaction or dissatisfaction and health. The Symposium on Industrial Health (10), Smith (53), and Woodward and Rennie (66) deserve attention.

Absenteeism

In Great Britain an excellent piece of research work was done by the Industrial Health Research Board on the problem of sickness among women in industry (23). A comparable job has been done by Gafafer (19). In his Public Health reports (20) on disabling sickness he studied both time lost and frequency of short-term absences. Fatigue is closely allied with absenteeism, regardless of whether the fatigue is physiological or psychological, according to Fetterman (14), Flinn (15), and Simonson (52). Wittmer (64), Woody (67), and Tallman (57) discussed the general medical aspect of absenteeism in industry and its probable control.

Health and Safety Programs

The doctor, nurse, and safety engineer have always been the trio considered necessary to furnish industry with an efficient health and safety program. But without the proper participation of labor and management, no program can be a success. A good cross section of this literature has been given by Bloomfield (4), Cameron (9), New York Academy of Medicine (43), Price (48), Sappington (50), Selby and Lutz (51), Owen (44), Newquist (42), and Perkins (46).

Summary

Most of the articles reviewed for this chapter were recitals of experience, with some directional trends of the present pointing to a better understanding on the part of the general public, the medical profession as a whole, and above all by business leaders, that good mental health is essential to production, to safety, and to life itself. Unfortunately, much of the literature in the past three years has been aimless or directed toward one small area of thinking in one particular phase. The next three years will probably see the launching of many research projects in this field with actual data gathered.

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CHAPTER VI

Experimental Contributions to Mental Hygiene

LAURANCE F. SHAFFER

FROM the earliest days of educational psychology, experiments performed under controlled conditions in the laboratory have contributed to the understanding of behavior. Experiments with lower animals have been the source of many principles that are directly applicable to the education of human beings.

During the past twenty years, an increasing number of experimental studies have been made of abnormal behavior in animals that throw light on human problems of conflict, frustration, aggression, maladjustment, and mental hygiene. An advantage of all infrahuman experiments is that a greater degree of control can be exercised over the total life of the animal than would be wise to exert upon a human being. This control clarifies the pertinent variables of many experiments. Studies of artificially induced abnormal behavior especially demand the use of lower animals since harmful effects may result. The applicability of concepts originating from animal experiments can be confirmed by comparing them to the findings obtained in the clinical study of persons who show deviations of behavior.

This is the first summary of experimental studies of abnormal behavior in the *REVIEW OF EDUCATIONAL RESEARCH*, altho Sears (21) referred to a few such researches in his article on personality and motivation, along with other material drawn from theoretical, clinical, and anthropological sources. During the three-year period covered by this review fewer studies have been reported than in a like time immediately preceding, probably because many workers in this area have been occupied with war services. The small number of new references is offset by the publication of a number of summaries (5, 6, 10, 17, 20, 22, 23), and especially by the full reports of two programs of long-term research, those of Gantt (7) and Masserman (13, 15).

Behavior Disorders Induced by the Conditioned Response Method

The first so-called "experimental neuroses" were reported by Pavlov (18). Dogs, placed in the restraining harness used in conditioned reaction experiments, were trained to respond by salivation to one stimulus and to inhibit response to another stimulus. When the difference between these stimuli became too small to be discriminated, certain dogs "broke down" and showed generally disturbed behavior. Only a minority of animals became abnormal, however, and their reactions were not all alike. Previously timid and inhibited dogs tended to become agitated, to show excessive activity, to bite the apparatus, and to act aggressively toward the experi-

menter. Originally active dogs tended toward generalized inhibition, maintaining set postures or going to sleep in the apparatus. Russian laboratories secured similar results in a few experiments with children, which were summarized by Razran (19).

Experimental neuroses in sheep, goats, and pigs were described by Liddell (10). The method was generally similar to that of Pavlov, except that the response conditioned was that of leg withdrawal to a weak electric shock. The stimuli to be discriminated were usually auditory, including tones and different rates of a metronome. Liddell placed certain interpretations on his experiments that are particularly applicable to human affairs. The dependent and trustful relationship of a domestic animal to the experimenter was held to be a significant factor in precipitating breakdown when faced with an impossible task. The restraint imposed by the apparatus also was a traumatic experience in that it prevented the animal from making substitutive or diverting responses that might have prevented the neurosis. Sheep conditioned in a small pen without bodily restraint could not be "broken down." Other evidence has confirmed the part played by restraint. Bijou (2) induced experimental neurosis in rats only by the use of a close-fitting cage, and found that the excited behavior was more pronounced when the rats' legs were restricted as well. Marcuse and Moore (12), however, obtained tantrum behavior in a pig when an accustomed restraint was removed, and suggested that a change in the degree of freedom was the determining factor.

Liddell found that sheep made neurotic by the experiments showed abnormal behavior outside of the laboratory. One sheep continued "neurotic" until its death at the age of thirteen years. Vacations from the laboratory, petting by the experimenter, and the use of sedatives had some effect, but no methods of treatment were very satisfactory.

James (9) induced abnormal behavior in another way by placing a weight on a dog's leg which made it more difficult for him to perform a conditioned avoidance response set up by an electric shock to the foot. Two animals were used. The initially more excitable dog showed a gradual development of hyperactive behavior. The more stable dog showed more evidence of physiological stress (heart rate) and finally "broke down."

A twelve-year program of research on neurotic behavior in the Pavlovian Laboratory of the Phipps Psychiatric Clinic was reported by Gantt (7). Observations were made on a considerable number of dogs, but emphasis varied, especially to the unstable dog Nick who was neurotic for ten of the twelve years of observation. Observations of the induction of behavior disturbances by excessively fine discrimination, and of the resulting abnormal reactions, confirmed the Pavlovian experiments. After a behavior disorder had been set up to one stimulus, a tone, a few associations of the tone with a light stimulus sufficed to make the light produce the same state. This is related to the readiness with which human neurotics can transfer

their anxiety to situations even slightly associated with the basic conflict. Elaborate measurements were made of autonomic functions of the dogs while being subjected to the experimental stress, including recording of glandular, heart, breathing, and sexual reactions. It was found that incipient disturbance could be detected in these functions before it was evidenced in overt behavior. This may lead to methods of value in predicting breakdowns.

Gantt made detailed studies of the generalization of neurotic behavior in the life of the dogs outside of the laboratory, and of its effect on social relationships with other dogs and with humans. In susceptibility to breakdown, dogs could be classified along a continuum from very stable to very labile, but the differences between excitatory and inhibitory types found by Pavlov were not confirmed. No final conclusions were drawn as to whether susceptibility was constitutional, or was due to the dogs' early experiences, but the labile animals tended to be more fawningly dependent on humans and more submissive to other dogs. This observation seems to confirm clinical studies of maladjusted children.

Studies of Conflict in Cats

Masserman (13, 15) studied cats' responses to conflict by a technic that permitted a greater variety of observations and more direct application to human affairs than did the conditioned reaction method. Cats were trained to raise the lid of a food box and to eat, upon the presentation of a light and sound signal. Conflict was then produced by subjecting the cats to a strong air blast or to an electric shock, or both, at the moment of feeding. The feeding response was abolished, and the cats showed additional general symptoms of: (a) anxiety in and out of the experimental situation, evidenced by trembling, crouching, mewing, and disturbances of heart rate and respiration; (b) avoidance or "phobic" reactions to food, to the apparatus, and to symbols associated with the experiment; and (c) defensive or substitutive behavior including excessive preening, seeking of attention from the experimenter, and aggressive acts toward other animals. Control observations showed that cats readily adapted to the light and sound stimuli alone, and to the air blast when it was not given during feeding. The latter observation was in contrast to the findings with rats, discussed below.

Masserman made a valuable distinction between frustration and conflict. When trained cats were merely frustrated by locking the food box or by placing them behind a glass partition, they adapted readily to the external frustration and in a short time came to pay no attention to the light and sound signals. None developed neurosis under these conditions. The essential requirement for the induction of abnormal behavior was held to be the conflict of strongly motivated antagonistic responses of seeking and avoiding.

Altho there were individual differences in susceptibility, cats as a species were found to be labile, so that all animals were disturbed by the very effective method used. The neurosis was aggravated by an increase of

one of the conflictual drives, as by increasing the hunger or the intensity of the electric shock. It was also accentuated by pushing the neurotic animal toward the food box, the locus of his conflict, by a movable barrier.

Masserman reported more specifically planned studies of the treatment of the artificially induced neurosis than have other experimenters. Rest and absence from the conflictual situation were of little or no therapeutic value. The reduction of one of the conflicting drives (hunger) had a temporary effect, but the neurotic behavior returned when the motive was again strong. A few cats were "cured" by the social example of a normal cat placed simultaneously in the box, but this was not a dependable method of treatment. A procedure of moderate value was treatment by "transference," defined as stroking, petting, reassurance and hand-feeding performed by the experimenter. This helped some animals, but was inapplicable to cats who had come to fear the experimenter in the course of their training.

Two generally effective methods of treatment were found. One was the forced solution of the conflict by environmental manipulation. The hunger drive was increased by food deprivation and by unusually tempting morsels in the food box, and the movable barrier was used to keep the animal near the feeding position. At first anxiety was greatly increased, but at length most animals broke thru their inhibition and fed. After numerous repetitions of this sequence, the neurotic behavior was replaced by almost-normal feeding, usually with some residual hesitation and timidity. Even more effective was the technic of treatment involving giving control of the experimental situation to the animal subject. Cats for whom this method was used had been taught to press a switch, giving the feeding signals, and thereby to feed themselves. Animals trained in this self-initiated act were less easily made neurotic by conflict than were other cats. When, after the formation of neurosis, they were induced by hunger and proximity to depress the switch again, they "worked thru" the conflict and usually showed marked and permanent improvement. Masserman noted that these two most effective means of treatment involved the greatest amount of spontaneous readaptation on the part of the animal. There are obvious implications favoring the client-centered attitude and the use of nondirective counseling technics that have recently come into prominence in the treatment of human personality disorders.

Other experiments reported by Masserman and his colleagues (14, 16) were concerned with the relationships between neurosis and the social phenomena of dominance and aggression. Sixteen cats were trained to respond to the food signals in the box used for the experiments already cited. They were then combined in groups of four, and hierarchies of dominance were determined for each group. In each group, the most dominant cat, A, would push aside B, C, or D to gain the food. Cat B would be submissive to A, but dominant over C or D, and so on to D who was submissive to all three of the others. Except for some pushing and crowding at the food box, no fighting or other aggression occurred. The less dominant cat waited quietly until the more dominant one was satiated. Further observations in-

volved the pairing of cats each of whom had previously been dominant, and the induction of experimental neurosis in some of the cats. It was found that "aggressive behavior did not appear in a dominant animal until it had been displaced downward in rank, either by competition with a more dominant cat, or by the development of neurotic inhibition induced by a motivational conflict." (16, p. 15). The aggressiveness diminished or disappeared when the relative dominance was restored, as by the cure of the neurosis. These findings have applications to the understanding of aggressive behavior both in individuals and in social groups.

Studies of Seizure States

The experiments of Maier (11) first called widespread attention to a behavior disorder of a very severe type that can be induced in rats. The abnormal response, quite different from the patterns of anxiety and agitation already cited, started with wild leaps and dashes about the room, followed by a convulsive state with spasms of contraction and relaxation of muscles, and ended in a passive phase during which the rat was inert, could be handled without resistance, and could be "molded" into any posture. In his original experiments, Maier confronted the rats with unsolvable discriminations. When they refused to react, he "motivated" them with a strong air blast to compel a response. Subsequent research soon showed that the abnormal behavior pattern could be evoked by the air blast alone, without a discrimination conflict. Intense and high pitched sounds elicited the seizure in susceptible rats. The phenomenon has come to be termed "audiogenic seizure," and is believed to be distinct from experimental neurosis.

Altho the seizure states of rats have little direct applicability to human adjustment problems, they are of considerable interest in themselves. The literature to 1944 has been summarized by Finger (5). Age, dietary deficiencies, and some drugs are related to susceptibility to seizure. Restraint of the rat alleviates seizures, an effect opposite to that of the true experimental neurosis. Studies of the effect of heredity have not yet been conclusive.

Arnold (1) found that strychnine injections made previously unresponsive rats susceptible, and increased the frequency of seizures in previously susceptible ones. From these data, it was argued that there is a continuum of susceptibility from the least to the most susceptible animals, without any distinct classes or types. By observing behavior in nonattack trials, Arnold also reported that normal animals tended to show manipulatory and exploratory behavior that formed a defensive reaction against the disturbing situation, while susceptible animals showed mainly involuntary activities of tremor, twitching, and lip-wetting that were not constructive defenses. Hamilton (8), in studying the effects of sodium bromide administered to mother rats upon the behavior of their offspring, found that the bromide groups were less timid in ordinarily frustrating situations such as having

to wade thru water, but were more susceptible to audiogenic seizures. These and other studies continue to show some relationship between the seizure states and other aspects of emotionality.

Some controversies about the seizure states have continued into the present triennium. Bitterman (3) argued that all personality disorders are conflictual, and that the seizures in rats are due to a conflict between their tendency to avoid the sound, and also to avoid the walls or barriers that prevent their escape from it. Finger (4) has replied by pointing out that the peculiar behavior of the seizure has been evoked only by the auditory stimulus, never by the numerous other difficulties and conflicts to which rats have been subjected. The bulk of the evidence seems to favor the interpretation that the seizures are not due to conflict, and that they are basically different in character from animal or human neuroses.

Interpretations and Applications

The studies of artificial behavior disorders in animals form an indispensable basis for understanding mental hygiene. They have shown that a conflict between approach and avoidance (13) or between excitation and inhibition (7, 18) may cause anxiety, hyperactivity, and substitutive behavior. Conflicts of this type are represented in many human situations, such as that of a child with a rejecting mother. An early conflict may have life-long neurotic sequels if not successfully treated (7). It involves many glandular, circulatory, and other reactions of the autonomic system (7, 10). Neurotic behavior is prevented by freedom and by overt activity (1, 10), but is made more likely by undue dependence and restraint (2, 10). The most effective treatment of neurotic conditions involves a maximum of self-directed readaptation on the part of the individual (13, 15). Neurosis has significance beyond the welfare of single persons, as it is related to the social phenomena of dominance and aggression (14, 16). An unsolved problem of great importance is that of variation in susceptibility to neurosis, toward which animal experiments may be expected to make future contributions.

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CHAPTER VII

Methods, Technics, and Instruments of Mental Hygiene Diagnosis and Therapy

RUTH STRANG

THE increasing scope and malignancy of psychoses in the world today demand more widespread and effective diagnoses and therapy. During the last three years progress has been made in meeting this need by providing more adequate training for psychiatrists, by enlisting more fully the services of psychologists, by establishing a closer relationship between psychiatry and other fields of medicine, and by developing methods of group therapy. Thus the kind of differentiated treatment appropriate for each individual can be determined more rapidly; the treatment process itself may be reduced in length; and the behavior, attitude, and motivation of groups influenced in the same amount of time that a therapist might spend on an individual case.

Since progress in this field is made not only by the experimental method, but also by the formulation of theories and explanations growing out of clinical observations and experience, articles of both types are included in the bibliography. This chapter overlaps to some extent with Chapter III in this issue and with chapters in other issues of the REVIEW: *Psychological Tests and Their Uses*, (Volume 14, No. 1) February 1944; and *Counseling, Guidance, and Personnel Work*, (Volume 15, No. 2) April 1945.

Clinical Application of Psychological Tests

One of the most significant developments in this three-year period is the statistical study and evaluation of the clinical use of tests previously administered chiefly for their total score. The most outstanding contribution to this development of psychological testing to facilitate psychiatric service has been made by Rapaport and his associates (46). Rapaport first selected a battery of tests chosen to evoke different aspects and levels of functioning: tests yielding ideational content, tests of intelligence and learning efficiency, tests of concept formation, and tests that reveal personality structure. The following eight tests were "welded into a single diagnostic tool": Wechsler-Bellevue Adult and Adolescent Intelligence Scale, Babcock Deterioration Test (most useful features), Goldstein-Weigl-Sheerer Sorting Test, Hanfmann-Kasanin Test, Word Association Test, Rorschach, Szondi Test, and the Thematic Apperception Test. Each of these tests was studied in detail, and statistical analyses made of the test data on 217 clinical and 54 control cases. Thus a summary of the diagnostic significance of success and failure on single items and indications of personality structure and of different kinds of mental disorder was obtained from individual tests and from the battery as a whole.

Instead of abandoning psychological tests because they are inadequate, other psychologists also have been developing the diagnostic potentialities of tests along these lines:

1. Better observation of the subject's cooperation and behavior while taking the test.
2. Clearer recognition of the objectives and limitations of each test.
3. Study of the qualitative interrelations among items and subtests.
4. More expert interpretation and synthesis of the results of various tests with information gained from interviews, observation, and questionnaires.
5. More stress on the "living clinical dynamics" revealed by the subject's responses in test situations.

"An Elementary Syllabus of Psychological Tests" (51) illustrates some of the above emphases.

The following are a few of the newer departures from the orthodox use of tests and rating scales:

To measure psychological understanding of human relations; subject is asked to respond to a test as he believes another person or a homogeneous group would respond (59).

To ascertain the influence on the results of a given test of factors such as social suggestion and conformity (6), parents' attitude (33), subject's response-bias (26), group psychotherapy (47), and attitudes hypnotically induced (32).

To compare test results of neurotic and "normal" subjects and to study the results further by means of factor analysis (8).

To use tests to understand personality problems of severely retarded children (52).

To construct specialized tests and inventories on the basis of clinical autobiographies, as, for example, an inventory for measuring psychological security and insecurity (39).

To use drawings as a basis for personality sketches (60) and the autobiography as an aid to psychotherapy (30).

Development of Screening Devices

During the war short tests, biographical questionnaires, and interviews were used effectively by slightly trained workers. Rodger (48) described the procedures used by recruiting assistants in the British Admiralty. Follow-up during training showed the value of the new method. Satisfactory reports on a man's operational proficiency, however, are difficult to obtain. Reports have been made of the following specific screening devices: the Maller Controlled Association Test (37), a neuropsychiatric questionnaire (23), the Shipley and Landis Personal Inventory, the Cornell Selectee Index (27), the group Rorschach (1, 27, 28), and the short personnel selection interview (42).

The inventory or questionnaire, which is essentially a group method of conducting a preliminary psychiatric interview, seems to have been more valuable for screening purposes in the armed forces than it has been with civilian populations. Proof of the value of these screening devices is not easily obtained. Mere comparisons of responses of men who have already broken down with those of normals are quite inadequate.

The Search for Syndromes

When personality is defined as a "dynamic organization of interacting forces which constitute its elements," technics for the measurement of personality must be concerned with syndromes, patterns, clusters, and longitudinal data. Defining syndrome as "a group of measurable aspects of personality which vary together," Horn (25) described a method of studying the dynamic relations among a large number of observations and measurements on twenty-eight individual cases by combining intercorrelations of .50 or higher into clusters. This method is of value: (a) In expressing differences between groups in the patterning of their personalities, and (b) in making more meaningful a single aspect of personality in a context of related aspects.

An application of this type of statistical analysis to 5000 consecutive children examined at the Institute of Juvenile Research (28) revealed five syndromes of deviant behavior: (a) the overinhibited child, (b) the unsocialized aggressive child, (c) the socialized delinquent child who is well adjusted within a delinquent group, (d) the encephalitic or brain-damaged child, and (e) the schizoid child.

A graphic method of studying personality patterns in individuals was described in detail by Andrews and Muhlhan (4).

Technics for measuring the purposive aspect of personality require longitudinal study and measurement of variation in the individual from one set of conditions to another. Gregory (20) attempted to analyze patients' personalities from the standpoint of their purpose—what they seem to be trying to do. While Allport's concept of teleonomic trends is useful in understanding behavior, the elaborate classification of overlapping remembered items does not seem to be particularly helpful.

Cattell (12) described three types of trait unities established statistically by covariation of more specific traits: (a) common and unique traits, (b) surface traits (correlation clusters), (c) source traits (factors). It is his opinion that "the task of psychological comprehension and prediction demands the discovery of trait unities of a high degree of efficacy."

Projective Techniques

Perhaps the most important contribution of the projective technics lies in the widespread application of the "projective hypothesis"—that every response a person makes is a reflection, a projection, of his private world of feeling and meaning. New developments in specific projective technics need not be treated here because the research in this field has been covered in other reviews. For example, Sargent (53) recently surveyed the rationale of projective methods and their various applications. The critical attitude toward projective methods expressed by Cattell (13) is a wholesome anti-

dote to too sanguine acceptance of these technics and a deterrent to irresponsible interpretation and use of projective test results.

Shock Therapy

Altho shock therapy lies more in the province of medicine than in the field of education, it is a development with which all therapists should be familiar. The conflicting results of research in this field may be attributed to a number of factors: the difficulty of assessing improvement objectively, the lack of control groups and follow-up studies over a period of years, the preponderance of unsubstantiated opinion presented as evidence, and the inexact definition of the kind and degree of disorders in which shock therapy has been used. Without the use of a control group there is no way of knowing whether the less severe cases treated might have been cured by psychotherapy alone within one or two months. Schnack, Shakow, and Lively (54) concluded from their control group experiment that approximately two-thirds of the improvement may be attributed to ordinary hospital routine and familiarity with the test situation. There is need for: (a) caution in the use of shock therapy because of its possible psychological and physical dangers to the patient (9, 34, 41), (b) better selection of cases for which a certain kind of therapy is most appropriate, and (c) continual search for the psychodynamics of the illness so that the cooperative and alert patient can be better assisted in his groping for insight leading to eventual recovery (15, 19, 50). A brief historical background and an understanding of the various agencies used in shock therapy is available in the summary by Stainbrook (58).

Group Therapy

Two reasons for the rapid rise of group therapy in the last two years are: (a) the need for serving a much larger number of persons than can be treated individually, and (b) the recognition that some persons are more responsive to group treatment than to individual psychotherapy. Group therapy gives the individual acceptance, support, release, ego-strengthening, reassurance, and derivative or direct insight (3, 56). There are a number of forms of group therapy, ranging from play technics and psychodrama to group discussion of personal mental hygiene problems (17, 31, 43, 45, 57). It is important to select the right kind of group for the right patient (18). A small beginning on the evaluation of the long-term effects of group therapy has been made (21).

Occupational Therapy and Rehabilitation

This is an important and timely topic which has been recently summarized by Elliott (16). Work appropriate to the individual is an important therapeutic agent (10).

Counseling and Psychotherapy

The interview and "nondirective" counseling have been reviewed in a recent issue of the REVIEW (49). Counseling and psychotherapy in which the individual takes responsibility and uses the resources within himself to gain a new orientation to himself and others and uses the counselor as a "catalytic agent" to activate his thought process, is not a new technic but a new and needed emphasis. Altho progress has been made in describing the counseling process, nothing highly significant has yet been reported on the scientific development and application of criteria for measuring progress in counseling and psychotherapy.

Present trends in psychoanalytic theory and practice were presented by Menninger and others in the January 1944 issue of the *Bulletin of the Menninger Clinic* (40). One trend is the emphasis on psychiatry for "normal" persons—the making available to large numbers of persons the implications of psychoanalytic theory. The question might be raised: How is this being done, and is it particularly desirable?

Case Studies

During this three-year period an increasing number of detailed case studies illustrating many methods of diagnosis and therapy (2, 22, 29, 44) have been published.

Evaluation of Mental Hygiene Techniques

Many opinions as to the effectiveness of various kinds of diagnosis and therapy have been expressed and several criteria for measuring progress have been proposed. One criterion is nonreturn to the hospital or clinic. Wilder (61) gathered together statistics of this kind. Clinics seemed to show the poorest results, but the differences between hospitals, clinics, psychoanalytic institutes, and private practice were not impressive. Most of the evaluation has consisted of impressions of the worker; a typical example is the case reported by Combs (14). Some of the therapists' personal observations of their cases have extended for more than twenty-five years. Andriola (5) used case study data to appraise success and failure in the treatment of twenty-five truants, and Burt (11) tested three procedures with 183 school children: (a) informal but systematic interviews, (b) paper and pencil tests of the "indirect" type, and (c) observations of behavior in standardized real-life situations. Burt found that "judgments combining all three procedures are far superior to those based on any one alone" and that the "observations under real-life conditions had the greatest validity." The interviews proved more valid than the tests. Maberly (35) likewise concluded that at present a dynamic clinical history is a far more reliable indication of adjustment than attempts to measure separately instability, sensitivity, and emotional maturation. Admittedly there are vast

differences among interviewers in their ability to investigate the client's real-life behaviors, and a good deal of work still needs to be done in checking their diagnoses and decisions.

The measurement of progress in counseling and psychotherapy comes up against many obstacles. Before the relative values of different treatments can be validly determined, the following conditions must be met:

1. Standard means of describing research populations must be developed, including some measure of the individual's initial capacity for improvement.
2. Individual differences in response to various diagnostic and therapeutic methods must be recognized and the diagnostic significance of his responses ascertained.
3. Standard means of measuring the degree of clinical improvement are essential.
4. The effect of different environments on the individual's adjustment should be included in the evaluation of different techniques and methods.
5. Long-term, as well as immediate, comprehensive follow-up of treatment should be made.

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CHAPTER VIII

School Health Education

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WORLD events of the past three years have accentuated the efforts of educators to reach better agreements regarding the place of health education in the total school program. Agreement has been expressed principally in recommendations, suggested standards, and policies aimed to give direction to the action which all groups concede must be taken. Research continues to be largely descriptive in nature altho some experimental studies are reported.

School Health Policies

The revised report, *Suggested School Health Policies* (38), is perhaps the most significant single document to appear. This report, endorsed by many education and health groups, represents a consensus of well-informed professional opinion. It suggested standards for the improvement of the total school health education program. The continued emphasis on physical fitness is reflected also in the 1945 yearbook of the American Association for School Administrators (1). Reports by the Educational Policies Commission presented recommendations for a minimal program of health education for every child (40). A committee of the North Central Association considered the importance of physical fitness and proposed that health education as a "fundamental" be the concern of the total school faculty and that sound programs already suggested be put into effect (3). The Chief State School Officers (53) recognized health education as a primary responsibility of state departments of public instruction and public health services as the function of the state departments of health.

Agreement of basic policies is indicated further in the cooperative efforts of nine national professional and lay agencies interested in child health (26), and in the activities of the Commission on Children in Wartime of the United States Children's Bureau (60). Action programs are proposed by this group also (61). Health education seems to be emerging as a priority for the peacetime curriculum.

Health Needs and Problems as a Basis for Health Teaching

There is strong support for the principle of building health education programs around the needs, interests, and problems of the learners. Likewise there is reasonably good agreement among health workers regarding the nature of these needs. A comprehensive statement of health needs of school age children with recommendations for its implementation has been compiled by a committee representing five national agencies (54).

The health needs of rural youth were given attention in the White House Conference on Rural Education and are reflected in the "Charter for the Education of Rural Children" (39). Frank (15) presented the physiological and emotional problems of adolescents and reminded us of their concerns about understanding themselves. Using several health inventories Neher (43) found that among 2415 high-school students the girls scored higher than the boys on health knowledge and attitudes; students of average or higher intelligence and from similar socio-economic levels scored higher on all factors; and only a slight positive correlation was found between health knowledge and attitudes and between health status and practices of students. Southworth, Latimer, and Turner (56) found little improvement in the scores of tenth, eleventh, and twelfth grade students with similar inventories. The health questions most frequently asked by these students were those relating to medical advice.

Applying recommended standards Jackson (22) found the health practices associated with interscholastic athletics to be poor. Wheatley emphasized the lack of responsibility assumed by high-school students for their own health (65), even in the face of the wide publicity given selective service data and the high incidence of remediable defects and preventable conditions among the teen age groups (41). Other needs were presented in studies dealing with the adequacy of the diet of all age and economic groups (29) and in the physical fitness programs for high-school and college youth proposed by the U. S. Office of Education (62, 63). In addition, Metheny (35) has reported the most frequent health problem among college women according to their self-analysis to be chronic fatigue. Children's questions as a basis for curriculum planning and needs were studied by Baker, who included health items (4).

Curriculum Planning and Content

Significant emphases in curriculum planning are the broadening of objectives resulting from our war experience (58), and greater participation on the part of the total school faculty (14). The earlier emphasis on school-health-agencies-community planning has been accelerated. Steps involved in successful planning are defined in the reports of Webster (64), Brown (8), Bliss (6), and a three-year project in two Michigan counties (36). At the state level the use of joint committees and the development of special projects has been stimulated by demonstrated war needs. Hoyman (21) reported a joint committee plan for Oregon, and Jacocks (23) a school health coordinating service for North Carolina. Twenty-four state departments of public instruction, assisted by the Kellogg Foundation, have developed special projects in community health education aimed at more functional health instruction for a large number of students, especially in high school; greater use of community resources; better planning; and more extensive teacher participation. Michigan was the first of the states

to develop such a project (51). The plans for California (30) and Washington (13) also have been described in some detail.

Content emphases reflecting wartime needs have centered around food and nutrition, alcohol and temperance, sex education and human relationships, venereal and other diseases, dental health, physical defects, accident prevention, and mental hygiene. The Sloan Experiment in Kentucky (55) and the reports of the Committee on Food Habits (21) have broadened the concept of nutrition education to include community and family living. In the field of temperance education the contributions of the School of Alcohol Studies of Yale University are outstanding in defining the problems, providing scientific content for teaching and in evaluating textbook material already in the field (25, 50). The controversial field of sex education is being treated as an "area" in health and human relationships and considered by students as an "essential" study (12). At the college level Kirkpatrick (28), Carter (10), and Rockwood (49) all presented data indicating the attitude and problems of college students towards courtship, marriage, and parenthood. Pickup reported an intensive project on malaria education for teachers and pupils (46). All of these fields are represented in manuals prepared by the U. S. Office of Education for health instruction in high schools and colleges (62, 63). A supplementary program of dental fitness is reported by Salzmann and Kramer (52). Suggested outlines of content have been developed by various states conducting community health education projects (13, 31, 51).

Methods of Teaching and Materials

Finding impelling incentives to motivate individuals to observe good health behaviors continues to be a major task for research. Mead (34) and others have pointed out the complexity of the problem of changing food habits. Lewin (33) studied the forces behind food habits and determined why people eat what they eat. He also showed that group decision is a more effective method than request or lecture in changing food habits of housewives. Bennett and Swartz (5) and Desmond and Baumgartner (11) obtained changes in diet among high-school students and housewives by employing the promotional methods of business. Strang concluded (58) that high-school students were motivated in healthful living when the problem to be solved or values to be achieved were real to them. The use of individual and group counseling as an aid in helping high-school girls appraise their own health and determine why they may not be achieving their optimal was described by Leonard (32).

In the field of venereal disease education Larimore and Sternberg (31) presented the army's experience in determining the most effective motives in preventing these diseases and Getzhoff (16) reported the influence of posters and lectures on the practice of enlisted men, according to their questionnaire responses.

Unless students are taught the discipline of correct thinking, Potthoff (47) contended that health teaching is likely to be of little practical value. Gold (18) emphasized the importance of full participation of teachers in changing the health knowledge and behavior of junior high-school students.

Studies pertaining to the readability or effectiveness of specific instructional materials are limited. The Sloan Experiment in Kentucky should provide interesting data on this point at some future date (55). Compilations of selected source materials continue, and to Byrd goes the credit of initiating the *Health Instruction Yearbook* (9).

Preparation for Professional Personnel

The kind of preparation in health education likely to be of greatest value to the classroom teacher or health specialist continues to be studied with emphasis on in-service education. Suggestions are contained in the reports of the study on teacher education sponsored by the American Council on Education (48) and the recommendation of the American Public Health Association regarding the qualifications for the preparation of the health educator (2). The workshop also continues as an accepted method of in-service education. Owen (44) and Stokes (57) have reported separately on a five-week course in health and human relations for teachers, while Jellinek and others (25) presented a symposium on alcohol education based on the first summer session of the School of Alcohol Studies of Yale University. In Los Angeles a course in sex education for teachers was given (27).

Evaluation

Evaluation was the theme of the *Forty-Fifth Yearbook of the National Society for the Study of Education* (42), the purpose of which was to provide teachers with accepted goals and suggestions on how to evaluate pupil learning in the area of understanding. One chapter was devoted to health education. Forty "authoritative" objectives were presented, as well as a list of twelve general appraisal procedures accompanied by a large number of specific illustrations as to how they might be applied by the classroom teacher to specific objectives. Boyd (7) has developed an instrument for measuring attitudes towards desirable food practices centering around the production, storage, and consumption of food, as part of the Sloan Experiment in Kentucky. The Committee on Food Habits has appraised research in the field and developed a *Manual for the Study of Food Habits*, which suggests the utilization of various methods of investigation. This manual contains a bibliography of 682 references (20). Partial appraisal of the Michigan Community Health Service Project was obtained thru the use of ten different procedures (37). The health knowledge test has been studied by Patty for reading difficulty (45), while Gold (18) has contributed a new standardized test equated in two forms with norms for different achievement levels within each of the junior high-school grades.

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CHAPTER IX

School Health Services

GEORGE M. WHEATLEY

17

RESEARCH in school health service during the war years has been neither very extensive nor very significant. There have been, however, several studies and reports worthy of some elaboration because they concern fundamental areas. Furthermore, it may be that, because of current popular interest as an aftermath of World War II, these reports may be more successful in influencing thought and practice than those made in peacetime.

The School Medical Examination

The school medical examination has been the subject of considerable study. This in itself is not noteworthy because it has been the object of review ever since medical examinations became the basis of school health service. The significance of this attention to the medical examination is the emergence of the concept that the examination can and should be an educational experience. A variety of reports in both medical and educational literature lead to this generalization. Rugen and Nyswander (18) in the *Forty-Fifth Yearbook of the National Society for the Study of Education* included the results of health service experiences as one of the most important measures of children's understanding of health. Wilzbach (31) reported the findings from the medical and dental examination of 5620 junior and senior high-school students and indicated that more than 80 percent required dental care, 6 percent had impaired vision, 2 percent had hearing loss, and over 5 percent had an abnormal heart condition. These children had not lacked medical supervision prior to this survey. Most of them were under the year-round supervision of private physicians. They had been examined in preschool roundups and in the first, third, fifth, and ninth grades, and had also been reexamined to qualify for athletic competition. But these physical examinations apparently had little impact on the students. When there is a purpose behind the examination, and when that purpose is understood by the recipient and the family, action results. Because the examination program described by Wilzbach was part of a Physical Fitness Victory Corps program, it had special significance in the eyes of the student, the faculty, the examining physicians and nurses, and the parents and the doctors in the community. Within six months after the start of the examination program, 80 percent of the students who needed care for their vision had received it. The record was comparable for other conditions. The conclusion is that periodic or annual examinations are generally fruitless unless accompanied by an educational program which motivates the individual to receive care for his health problem and to make the examination a satisfying experience.

Blanchard (1) reported that students have reacted to the usual school medical examination by family physicians as well as school physicians with such comments as "The doctor was in too much of a hurry," "He only listened to my heart," "They aren't interested to ask you any questions," "We never know what the doctor thinks about us."

The draft findings have helped to awaken the family physician to his responsibilities in health guidance which may eventually improve the health examination of the school child. Dunham (2), writing of the experience and impressions of a rural examining physician, admitted the physician has not measured up to his potentialities as a source of health education. Wilson (30) stated that the most effective results were obtained in the health service program where it was integrated with effective health teaching. The educational opportunities in the health service program have been described (28). The term "health counseling" has been more widely used to suggest the opportunity in the school for guidance and interpretation to the family and the student concerning the individual pupil's health needs. Leonard (8) has reported her counseling experience with adolescents.

This educational and counseling aspect is the important problem in school health service according to Strang and Smiley (22). Also, it has been emphasized by the Educational Policies Commission in its report *Education for ALL American Youth* (14). What is accomplished for the health of the child, however, depends in great measure upon the interest and skill of the physicians of the community.

Powers (19), in reviewing medical problems of school children, has called attention to their emotional and behavior difficulties. He finds about one-third of school children seen in a pediatric clinic have complaints which are based upon nervous, mental, or emotional disease. The adequate study and treatment of such cases is beyond the individual physician, no matter how able and understanding. It requires the special skills of psychologists, psychiatrist, and special educational workers. Special services are required for vision, hearing, orthopedic, and cardiac problems as well as mental disorders.

The Teacher and the Health Service

Miller (12), Nyswander (18) and Harold and Hershey (5) have shown that the teacher can do a very effective job with respect to the health of her children in recognizing normal conditions, segregating deviations, and making judgments. This recognition of the teacher's front-line position in health service is not new. What is new is the research to validate the teacher's ability to serve in this capacity. These studies have had the effect of substantiating a thesis long held by students of school health service and of stimulating the preparation of teachers to aid them to observe the health of children. Several states (6, 7, 16, 17, 24), thru the cooperation of their education and health departments, have produced very useful materials to guide teachers. In-service training courses have been stimulated and offered

by some teacher-training institutions. One of the first leaders in school health service, James F. Rogers of the U. S. Office of Education, early understood the importance of the teacher as an integral part of school health service. His publication *What Every Teacher Should Know About the Physical Condition of Her Pupils* is a classic. For years it was the only material available in sufficient quantity to serve teachers as a guide in the health observation of their pupils. This publication (20) has been completely rewritten and reprinted in the light of modern developments in pediatrics and child care.

There has been needed, in addition to written material for teachers, visual aids to help them see the characteristics of good health and the early signs suggestive of ill health. The School Health Bureau of the Metropolitan Life Insurance Company has just released a colored film strip (11), which is the result of a three-year experiment to reproduce by color photography the characteristics of good health in children and some of the more common signs of illness or an under par condition. The film strip was photographed in the Children's Clinic of the New York Hospital—Cornell Medical Center and at the Hunter College Elementary School. The strip has been released to state departments of health and education, social agencies, parent-teacher associations, and school health authorities.

Growth and Development

Recent studies indicate that the period of adolescence is longer than was previously believed. Stuart (23) reported that it covers roughly the second half of the period of development. A contribution of distinction was the yearbook on adolescence (15), a critical summary of studies of individual development based on technics of investigation in physiology, physical measurement, psychology, and sociology by a group of distinguished contributors. Gesell and his associates (4) have done a somewhat similar study of the child from age five to ten. Meredith and Meredith (9) found the typical Toronto school boy aged 13 and 14 was taller in 1939 than was the boy of 1892 by nearly 9 centimeters, and the typical boy of 1923 was about midway between. The differences at all ages were in the same direction but to a less marked degree. Howard Meredith also found that school boys in the United States today, both white and Negro, are 6 to 8 percent taller and 12 to 15 percent heavier than were boys half a century ago (10). The causes for these evidences of increasing size with time call for further study, but they are doubtless related to differences in the incidence of illness in early life, to dietary habits, to habits of activity, and to other more obscure factors generally referred to as socio-economic.

Air Sanitation

The war greatly advanced knowledge of air sanitation. The problem of controlling respiratory diseases among troops in barracks led to study of

several promising methods of air purification, such as ultraviolet irradiation of the air, dust-suppressive measures, and the use of germicidal chemical vapors. The application of these technics to the control of communicable diseases in civilian life has great potentialities. Mudd (13) reviewed some of these possibilities. The only research published on the use of these measures in schools is the work of Wells, Wells, and Wilder (25) and by Wells and Wells (26), which relates to the use of ultraviolet light. These writers reported the successful control of chickenpox and measles when the source of the contagion was in the school. It is significant, however, that the authors were unsuccessful in controlling colds, presumably because there was adequate opportunity to contract the colds in unprotected environments outside the school. It should be emphasized that air sanitation for schools is still in the experimental stage. More study of the practical application of ultraviolet lights to schools as well as investigation of dust-suppressive measures and the germicidal sprays must be carried out before their value in the control of communicable disease among school children can be known.

Evaluation of Health Programs

A research project of interest is the study of health and physical education initiated in February 1944 by the joint staff of the New York State Education Department's Division of Research and Division of Health and Physical Education (17). This project seeks to answer two questions in each of the three areas of the program—school health service, health teaching, and physical education: (a) To what extent are the regulations pertaining to the school health program carried out in the schools of the state, outside the large cities? (b) What are the results, in terms of pupil outcomes, of different local programs? The answer to the second question required exploration in new areas of study, especially in regard to the level of pupil health, attitudes toward health, actual health behavior, and physical skills. In the search for indexes of pupil health status, special statistical techniques were developed, which may become a useful administrative and supervisory tool.

A summary of the findings concerning the health service aspect of the program showed that the schools rather generally met the letter of specific laws and regulations. For example, all the schools employed a physician and each pupil was examined every year. But only 23 percent of the schools met the approved ratio of physician to pupil. In spite of the inadequacy of medical service in most of the schools, very little effort was made to supplement the school service by encouraging families to use their own physician for the child's health examination. Only 3 percent of the schools had private physician examinations for more than 10 percent of its pupils. School medical examination records were found inadequate as a source of information as to pupil health status.

Pupil health records were less regularly filled out with respect to recom-

mendations of the physician than with respect to defects found, still less with respect to treatments secured. In more than half the schools, the parts of the record dealing with a history of illness and teacher observations were not used at all. On the other hand, records of height and weight were used to derive two indexes: (a) a development level for age and (b) maintenance of body-build. The Wetzel Grid (27) method of recording height and weight was found helpful in demonstrating these relationships. An interesting but puzzling discovery was that absence for illness was higher in the schools with the best over-all health programs than in the schools with the poorest over-all programs, altho there was no significant difference between the two groups in percent of total absence.

Summary

War has once more called attention to the importance of fostering and protecting the welfare of children. Studies reveal that school medical examinations which have served as the cornerstone of the school health program leave much to be desired from a fact-finding as well as educational point of view. There is a growing awareness of the need for specialist services to provide more accurate detection of abnormalities. The necessity for closer working relationships between the school and the community treatment resources to achieve medical and dental care for children is apparent. It is evident, too, that better preparation of school health personnel is needed, including greater emphasis on the important role of the teacher in the health service program. With this heightened understanding must come a more vigorous and critical inquiry into current practice. No more complex field of research exists than school health, concerned as it is with the learning and the biological processes. No more challenging study invites the investigator because, thru the marriage of these two disciplines, should come new knowledge in the prevention of disease and the improvement of health.

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CHAPTER X

Contributions of Physical Education to Physical Fitness

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To HAVE meaning, research must be viewed against the background of the period from which it emerged. Only by so doing can the contributions of the last three years be presented in sufficiently discerning perspective to evaluate their educational significance.

The examination of large numbers of Selective Service registrants and the induction of the fit into the armed forces was followed not only by a study of rejections and their cause, but also by clarification of the physical and mental qualities necessary to meet the exacting manpower needs of war (17). The national neglect of health and fitness thus revealed, led in 1943 to the creation by executive order of a Committee on Physical Fitness functioning under the aegis of the Federal Security Agency. To this action was subsequently added the support of organized medicine, thus, apathy and indifference were supplanted by widespread interest in the institution of corrective measures designed to reduce the time and effort required to bring the bodily development of inductees to a level adequate to meet the rigors of combat.

Immediate therapeutics took the form of war adaptations of physical activities too numerous to cite individually. Notable among these were the extensive introduction of military aquatics, vigorous conditioning exercises, and various forms of developmental combatives. The imagination and vigor that went into the initiation of these programs stands to the credit of the professional physical educator, even tho nothing in the literature gives demonstrable evidence of the military utility of the mass pedagogical experiment to which preinductees of school age were subjected.

Emphasis on the Biological Values of Exercise

The general physical education literature of the last three years divides writers into two clearly defined camps. First, those who have rallied to the defense of traditional peacetime activity programs with their emphasis on socio-psychologic objectives, disclaiming responsibility for the unfitness of America's youth and laying the blame on poorly trained leadership, inadequate facilities, overcrowded classes, insufficient time, and the indifference of controlling agencies. Others, not insensible to the significance of the success of military physical fitness and convalescent training and reconditioning programs, subjected the philosophies and technics of the last two decades to searching reexamination. From this scrutiny emerged a conviction that physical developmental needs had not been met by the programs and practices of prewar years, and that it is the inescapable basic concern of physical education to provide these needs.

The most fundamental indictment of prewar activity programs was directed at their dosage. Improvement in the prepotent functional components of fitness is achieved only as a result of disciplined training which is pitched at a level that strains capacity, and then grows progressively more severe as physiological adaptations augment speed, skill, strength, endurance, and power (20).

Evaluating Physical Fitness

Few areas in human biology are more complex than the quantitative assessment of physical fitness and the measurement of man's performance (6, 21, 22, 23). The need for such appraisement was defined by Cureton in the early years of the war (3). The methodology of selecting and validating test items which measure motor skill fitness is well known, but such tests had never before been applied so extensively to such large samples of medically fit individuals under such favorable experimental conditions (2, 12, 14). The exigencies of war gave rise to testing on an unprecedented scale.

So called functional or dynamic fitness has also been subjected to exhaustive study. This aspect of fitness requires measurement of the general efficiency of the body in the performance of strenuous work. Systematic study of this problem commenced in 1942 with the publication of two physiological criteria of considerable practical importance: first, *work index* = the duration of exercise in seconds — maximum pulse rate in beats per minute + the maximum lactate in mg./100 cc. of blood (7); and second, *index of fitness* = the duration of a standard exhausting exercise in seconds \times 100, divided by 2 \times the sum of the pulses in recovery (8). Between February 1942 and October 1944, Brouha and his associates published nineteen papers on the subject of dynamic fitness, six of which appear in Vol. XV of the *Yale Journal of Biology and Medicine*. The viewpoints of the group are in part epitomized in one of the final contributions of the series (4).

Measuring Effectiveness of Physical Activity Programs

The Brouha papers were concerned not only with measurement of the dynamic fitness of adolescents and young adults of both sexes, but also with the utilization of the objective criterion proposed in the assessment of the efficiency of physical activity programs. Prior to this, little had been done to determine whether biological effects purported to be the concomitants of exercise were actually produced. Others added similar information, unequivocally demonstrating the capacity of specially directed physical training programs to enhance both dynamic and motor fitness (3, 11, 24). Activities geared to the capacities of the mediocre yielded negative results in accord with the overload concept, or led to regression in fitness when administered to students with a high initial ability (15).

Wilbur (25) attempted to prove the superiority of the "sport" vs. the "apparatus" method of teaching.

New Areas of Activity

One of the most dramatic chapters in the recent history of war medicine is that written by those who contributed to the convalescent training and reconditioning programs of our military hospitals (13, 18). Altho much of the evidence is purely clinical, empirical experience suggests that the recovery from disabling injury or disease may be significantly expedited by the judicious use of early and progressive exercise. Its benefits in the management of convalescence from rheumatic fever and primary atypical pneumonia are described in the literature (9, 16).

Writing on "the shape of things to come", Shea (19) sounded a thoughtful and realistic keynote for the future with stress on the principle of "practicalization," and stress on the lessening of emphasis on educational technic and socio-recreative objectives in activity programs. Altho the expedients of war need not be made the necessities of today, proper emphasis on vigorous conditioning activities should be continued. An expanding interest in the reconditioning of the handicapped and the deviate assures the continued concern of physical educators for participation in the comparatively new field of service to the sick, known as Physical Medicine (5, 10). Bilik (1) sounded a timely caution lest in their zeal physical educators encroach upon the practice of the healing art.

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CHAPTER XI

Relationships of Physical Education to Mental Health*

JOHN E. DAVIS

DEVELOPMENT of the general field of psychiatry, representing an evolution from "sorcery to science," has lead to a more careful evaluation and appreciation of the mental hygienic forces inherent in physical education. The increased interest in mental hygiene during war years has led to extensive discussion of the relationships of physical education to mental health but not to experimental work and clinical studies conducted under research methods. At this stage, however, it will be useful to review the ways in which physical education activities have been used to contribute to mental health: as preventive aids, as a therapeutic agent with particular attention to psychiatric concepts of play (24, 31, 34), and as adjuvants to medical treatment (29).

Psychiatric Concepts of Physical Education

For more than twenty-five years, significant contributions to a psychiatric concept of recreation and physical education and the psychotherapeutic values of physical activity have been made by Brush (4) and other investigators. Davis (9) has reviewed these contributions. More recently Menninger (24) pointed out the values of play activities in the treatment of psychotic patients.

A program of convalescent training in which physical recreational activities played an important motivational role in both physical and mental rehabilitation was described by Rusk and Taylor of the Army Air Forces (35). This use of physical activities became one of the most important therapeutic contributions of physical education developed in World War II. The broad developments in this field have been accompanied by increased specialization.

Medical Adjuvants

Physical and psychological specializations of physical educational activities have gained an important role as medical adjuvants. Notable strides have been made in the remedial as well as in the palliative aspects. Physical education has been incorporated in a modernized treatment of combat fatigue, psychoneurosis and psychosis, both civilian and war (16, 17, 20, 22, 27, 30, 33). Campbell and Davis (5) have reported in the *American Journal of Psychiatry* the operation of a highly diversified program of physical education for psychotic patients, its development, results, and

* As this review is the first on this topic in this series, some references published earlier than 1943 are included.

failures over a period of seventeen years. This report provides an historical résumé of physical education in its distinctive relationships to the treatment of the mentally sick.

Expanding Areas

The value of physical education activities as mental health aids and as psychotherapy have stressed the role of play as a psychological release from anxiety for psychoneurotic and psychotic conditions (8, 28, 34) and big muscle activity as a natural and extroverting activity, a means of inciting competition, promoting cooperation, modifying behavior, and providing satisfaction in achievement (1, 3, 10, 26, 36). Physical education contributes indirect motivational values, as well as direct reeducative technics (2, 26). The extension of educational activities into the community suggests numerous studies in socialization and resocialization in which physical education methods have become increasingly important (3, 23).

The use of physical education activities has also developed in the direction of child play analysis (1, 14, 18, 28), the psychological balance in work adjustment (25, 30, 31), and recreational therapy for the chronic alcoholic, in which physical education provides a distinctly valuable palliative (11).

Physical education in relationship to mental health has evolved from the physical to the psychological (4, 32), social (21), medical (29), psychosomatic (15, 20), resocializing (3, 10), and mental hygiene phases (6, 34)—each step in this process of evolution producing important contributions to the concept of treatment of the whole man.

The value of physical educational activities in "getting close to the mentally sick patient" in the development of empathy, has received considerable stress in psychiatric practice. Dr. Roy J. Hoskins, Director of Research, Memorial Foundation of Neuroendocrine Research, Harvard Medical School, states: "In the patients whom I have seen leave our hospitals in a state of remission, I have been more impressed with the improvement of their empathic capacity than with any other change" (19).

Trends and Future Needs

Physical education has significant and important potentialities in the prevention, diagnosis, treatment, and interpretation of mental illness. There is a need to deepen and broaden the social bases of play, and to provide psychiatric analyses and tests to afford a more scientific foundation for such psychiatric applications (24).

More specifically, there is a need to develop general spontaneity in play as basic material for psychological tests to be used in diagnosis and treatment, to develop further physical exercise specializations to meet the distinctive needs of various mental disease entities (12), and to develop under

direction of the psychiatrist specialized physical education activities for psychoneurotic and psychotic patients receiving electric shock, insulin therapy, and other drastic treatments, after the patient becomes more accessible to social and socializing physical activities, as a result of treatment. These uses would bring physical education into a highly specialized psychiatric field, which requires technical training as well as the closest liaison between the physical exercise therapist and the psychiatrist.

These growing relationships of physical exercise to increasing specialization in psychiatry, involving a significant increase in the range and nature of activities, points to the necessity of intensive training (10). Dr. Paul R. Hawley, chief medical director of the Veterans Administration, and Dr. Donald A. Covalt, assistant medical director, Medical Rehabilitation, have organized a special school at the Winter General Hospital, Topeka, Kansas, under Dr. Karl Menninger for this purpose. Briefly, the combined psychiatric staffs of the Menninger Clinic and Winter General Hospital, with the aid of specialists in physical education, are presenting a course of instruction which includes: a study of the patient as an individual; the modification of physical activities to meet his distinctive needs; a study of various disease entities in relationship to interest and capacity for physical activity; and technics for observing physical and mental reactions.

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